The PHOTOFACT® Servicer

SET 554 ★ *Published for all users of Howard W. Sams' Photofact Folders* ★ NOV. 1961

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This Servicer provides you with essential data on other models or special equipment not covered in standard PHOTOFACT folders. The schematics and supplementary data included here will be of valuable help to you in servicing this equipment.

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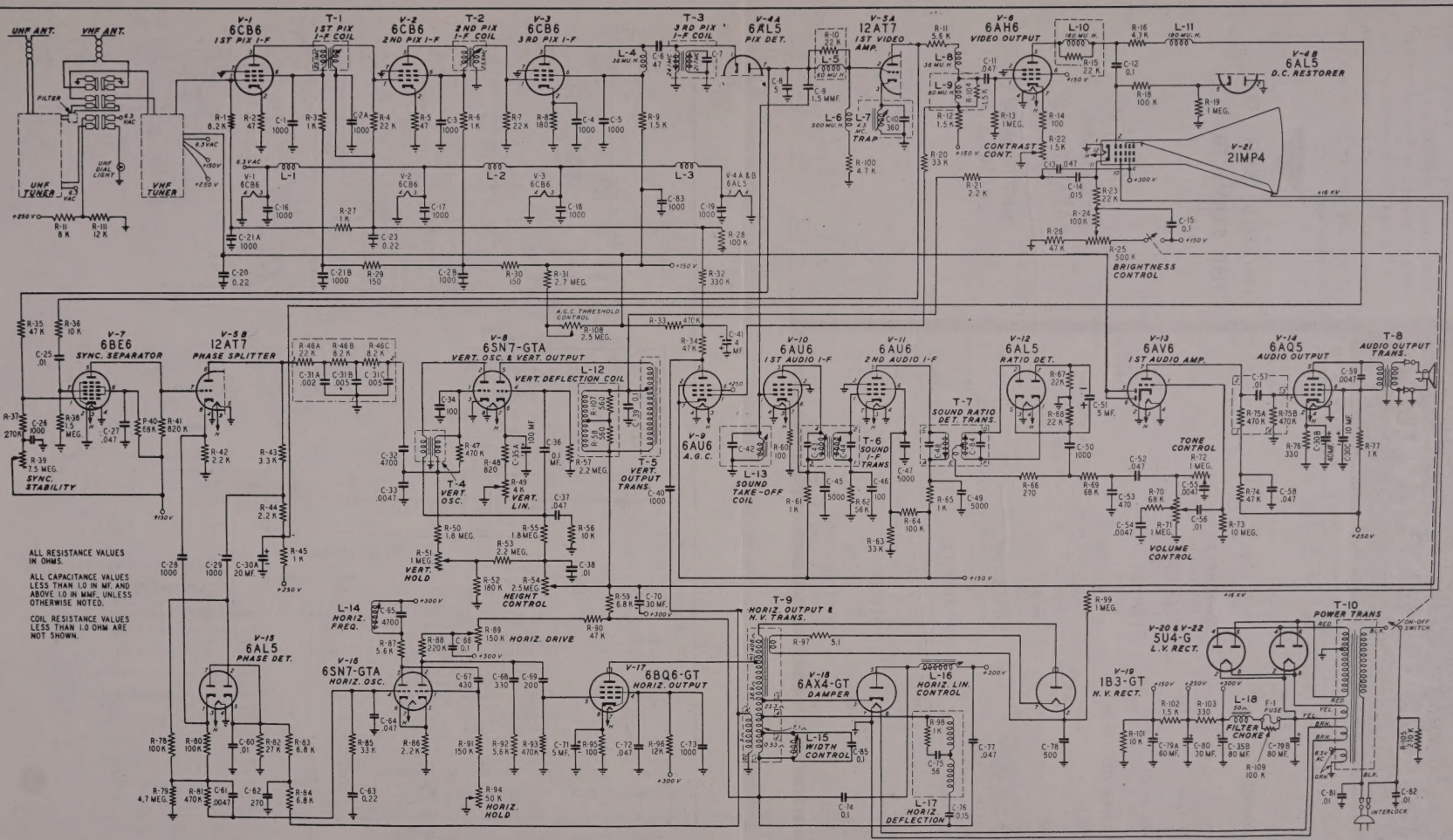
Bendix Models
853A, B, C, D

Truetone Model
2D1345A



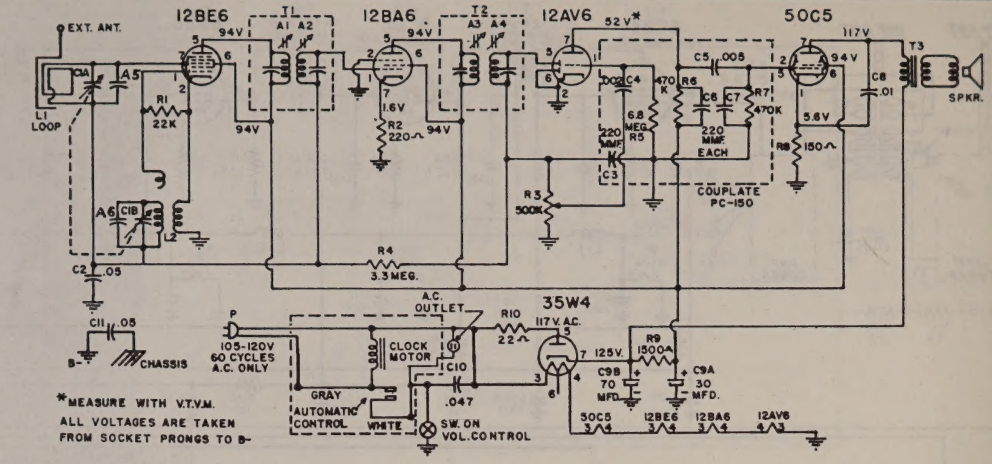
NOTE: There are two different ratio detector transformers used in these receivers, Part Numbers 9A2269 and 9A2295. The T-7 circuit shown in this schematic diagram covers the 9A2269 ratio detector. Receivers using the 9A2295 ratio detector can be identified by the following changes.

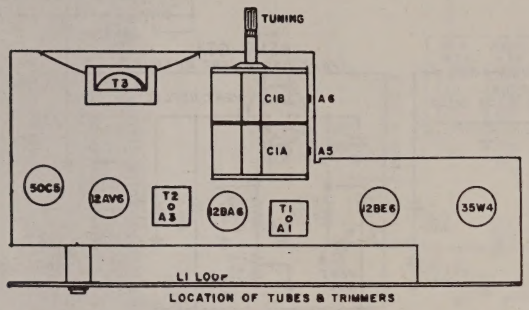
C-50 becomes 47X570 330 mmf molded mica condenser.
R-64 becomes B84333 33K ohm 0.5W carbon resistor.
R-67) become B83103 10K ohm 0.5W carbon resistors
R-68)

In addition to the above, the 9A2295 ratio detector has terminals with numerical identification (1,2,3, etc.) whereas the 9A2269 has alphabetical identification (A,B,C, etc.) on its terminals.

TRUETONE MODEL 2D1345A

Schematic Diagram Courtesy of Western Auto Supply Company





ALIGNMENT DATA

(Variable Condenser Fully Open)

Generator Frequency	Adjust Trimmers
I.F. 455 KC	A4, A3, A2, A1
R.F. 1640 KC	A6 A5

REPLACEMENT PARTS LIST

PART NO.	SYMBOL NO.	DESCRIPTION
		ELECTRICAL COMPONENTS
266055		APPLIANCE—Outlet
275120-1		CABINET—Assembly, Walnut, includes Ivory Front (Model 853B)
275120-2		CABINET—Assembly, Ivory, includes Front (Model 853D)
275120-3		CABINET—Assembly, Green, includes Gray Front (Model 853C)
275120-4		CABINET—Assembly, Gray, includes Green Front (Model 853A)
275117		CLOCK—Shield
275116		CLOCK—includes Timer Assembly
275115	L2	COIL—Oscillator
275111	C1a,b	CONDENSER—Variable, 2-section Gang
267001-503	C2,11	CONDENSERS—P.T., .05 MFD. 400V
267045-103	C8	CONDENSERS—P.T., .01 MFD 600V
267013	C9a,b	CONDENSER—Electrolytic, 70-30 MFD 150V
267055-473	C10	CONDENSER—Molded Paper, .047 MFD 600V
268910-2	P	CORD—Power
275114	C3,4,5, 6,7	COUPLATE—Molded Unit
275119	R5,6,7	FASTENERS—Back
		ELECTRICAL COMPONENTS - Continued
275123		KNOBS—Clock (Model No. 853A, B, C, D)
275121-1		KNOBS—Selector, Ivory (Model No. 853B, 853D)
275121-2		KNOB—Selector, Gray (Model No. 853C)
275121-3		KNOB—Selector, Green (Model No. 853A)
275122-1		KNOB—Volume, Ivory (Model No. 853B, 853D)
275122-2		KNOB—Volume, Gray (Model No. 853C)
275122-3		KNOB—Volume, Green (Model No. 853A)
275118	L1	LOOP—Antenna and Rear Cover Assembly
RC23A223M	R1	RESISTOR—22K ohms, 1/2W
RC23A221K	R2	RESISTOR—220 ohms 1/2W 10%
275113	R3	RESISTOR—.5 MEG ohms Volume Control with Switch
RC23A335M	R4	RESISTOR—3.3 MEG ohms 1/2W
RC23A151M	R8	RESISTOR—150 ohms 1/2W
RC24A152M	R9	RESISTOR—1500 ohms 1W
RC23A220M	R10	RESISTOR—22 ohms 1/2W
275110	T3	SPEAKER—Assembly includes 4" PM SPK. and 3/8 x 3/8 Output Transformer
275112	T1,T2	TRANSFORMERS—IF

Information Courtesy of Bendix Aviation Corporation

PHOTOFACT® Folder with CIRCUITRACE®

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11

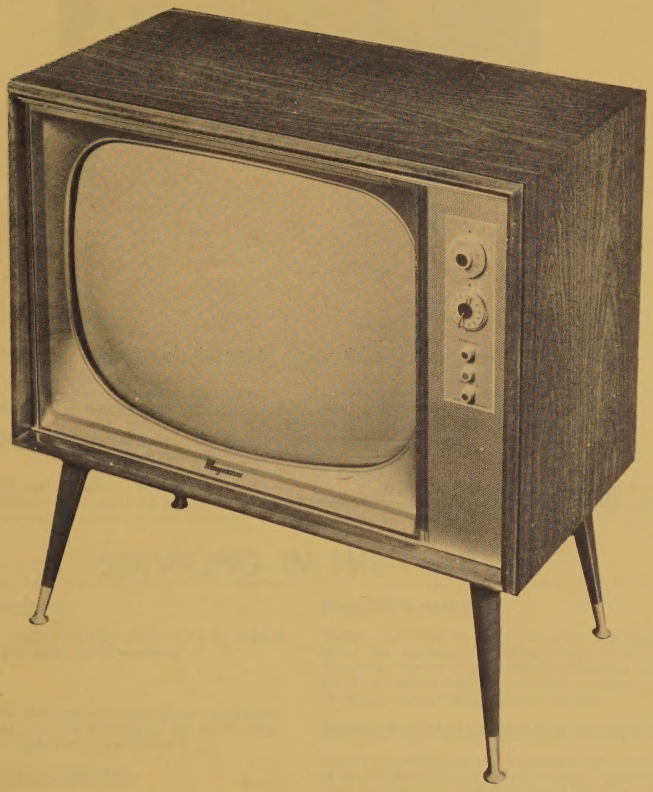
IMPORTANT FILING NOTICE

The TV Folder for this envelope will be found among the first folders in this complete Set of folders.

Merely insert the corresponding folder on this model in this envelope to retain proper filing and indexing order.

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11



REPRESENTATIVE MODEL USING CHASSIS U35-02-00

SET 554 FOLDER 1

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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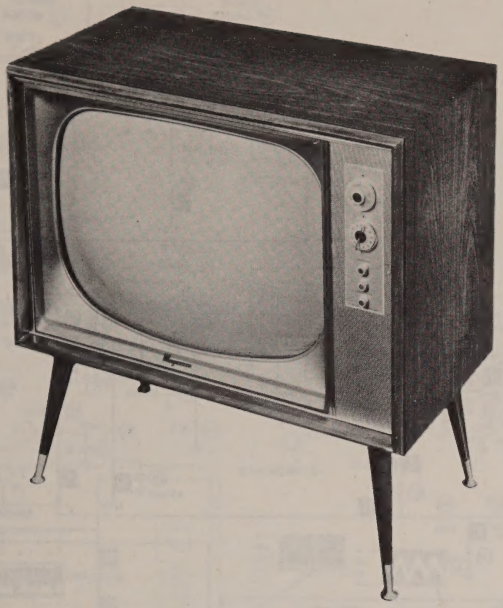
MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11



REPRESENTATIVE MODEL USING CHASSIS U35-02-00

TRADE NAME	MAGNAVOX Chassis C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11
MANUFACTURER	Magnavox Co., 2131 Bueter Road, Ft. Wayne 4, Indiana
TYPE SET	Television Receiver
TUBES	VHF - Sixteen (Seventeen with UHF Tuner)
POWER SUPPLY	110-120 Volts AC, 60 Cycle RATING 150 Watts, 1.4 Amp. @ 117 Volts AC
TUNING RANGE	Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier)

SERVICING IN THE FIELD

SAFETY GLASS REMOVAL

Remove 4 screws holding the trim strip at the top edge of the safety glass. Tilt glass out and remove.

FUSE DEVICE

A Circuit Breaker is used for low voltage power supply protection, and may be reset by depressing the reset button. (For location, see "Tube Placement Chart".)

TUNER OSCILLATOR ADJUSTMENT

To touch up the VHF Oscillator, remove Channel Selector knob.

AGC

No provision is made to vary the AGC on this receiver.

FOCUS

On Chassis C/U/V35-01-00, Focus Adjustment is made by connecting jumper spring from pin (6 to 1) or pin (6 to 10) of picture tube.
All other Chassis use a Focus Control.

BRIGHTNESS, CONTRAST

Chassis C/U/V35-03, -04, -07 use a Light Dependent Resistor for automatically varying contrast and brightness. To obtain correct ratio between brightness and contrast, pin 10 of picture tube is connected to Junction of C3 & C4 or Boost. See TV Schematic for details.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENT

Coarse adjustment of the Horizontal Hold is accomplished by the proper setting of the Horizontal Frequency Slug (B1). (For location, see "Tube Placement Chart".)

WIDTH

The width may be varied by a Width Coil Slug. (For location, see "Tube Placement Chart".)

CENTERING

Centering is accomplished by 2 magnetic rings, located behind the yoke, on the neck of the picture tube.

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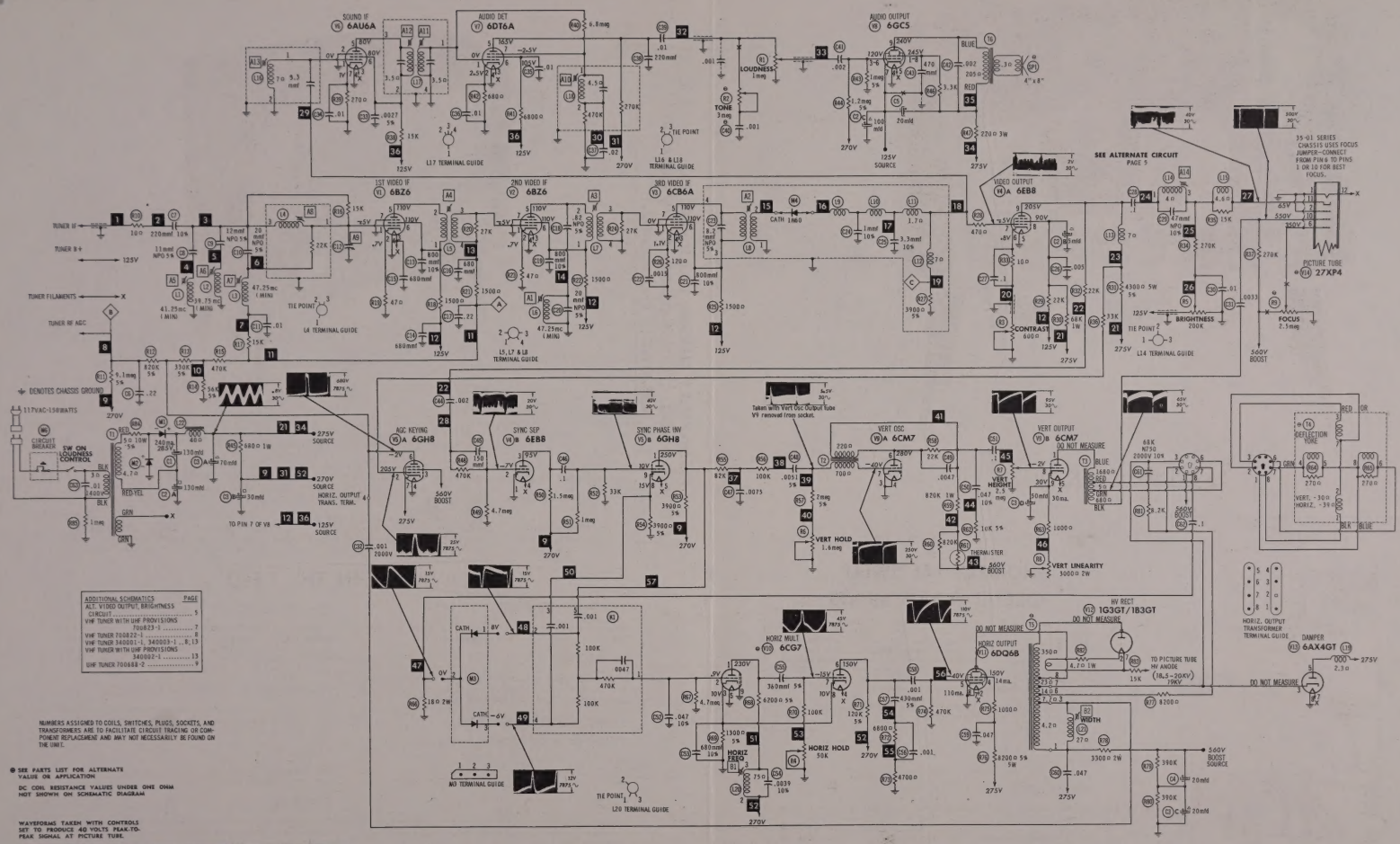
SOUND IF
V5 6AU6A
AUDIO DET
V7 6DT6A
AUDIO OUTPUT
V8 6GC5
1ST VIDEO IF
V1 6BZ6
2ND VIDEO IF
V2 6BZ6
3RD VIDEO IF
V3 6CB6A
VIDEO OUTPUT
V4 6EB8
SEE ALTERNATE CIRCUIT PAGE 5
AGC KEYING
V6 A 6GH8
SYNC SEP
V6 B 6EB8
SYNC PHASE INV
V5 B 6GH8
VERT OSC
V8 A 6CM7
VERT OUTPUT
V9 6CM7
HORIZ MULT
V10 6CG7
HORIZ OUTPUT
V11 6DQ6B
HV RECT
V12 1G3GT/1B3GT
DAMPER
V13 6AX4GT
PICTURE TUBE
V14 27XP4
117VAC-150WATTS
DENOTES CHASSIS GROUND
TUNER IF
TUNER B+
TUNER FILAMENTS
TUNER RF AGC
CIRCUIT BREAKER
SW ON LOUDNESS CONTROL
LOUDNESS
TONE
CONTRAST
BRIGHTNESS
FOCUS
VERT HOLD
VERT LINEARITY
VERT HEIGHT
THERMISTER
HORIZ FREQ
HORIZ HOLD
WIDTH
HV ANODE
DEFLECTION YOKE
HORIZ. OUTPUT TRANSFORMER TERMINAL GUIDE
TIE POINT
L4 TERMINAL GUIDE
L5-L7 A-B TERMINAL GUIDE
L16 & L18 TERMINAL GUIDE
L17 TERMINAL GUIDE
L20 TERMINAL GUIDE
M3 TERMINAL GUIDE
TO PIN 7 OF V8
HORIZ. OUTPUT TRANS. TERM.
TO PICTURE TUBE HV ANODE (18.5-20KV)
DO NOT MEASURE
Taken with Vert Osc Output tube V9 removed from socket.
35-01 SERIES CHASSIS USES FOCUS JUMPER—CONNECT FROM PINS 10 PINS 1 OR 10 FOR BEST FOCUS.
125V SOURCE
275V SOURCE
270V SOURCE
560V BOOST
560V BOOST SOURCE
ADDITIONAL SCHEMATICS
ACT. VIDEO OUTPUT, BRIGHTNESS CIRCUIT 5
VHF TUNER WITH UHF PROVISIONS 700823-1 7
VHF TUNER 700822-1 8
VHF TUNER 340001-1, 340009-1 ..8, 13
VHF TUNER WITH UHF PROVISIONS 340002-1 13
UHF TUNER 700868-2 9
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.
SEE PARTS LIST FOR ALTERNATE VALUE ON APPLICATION.
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM.
WAVEFORMS TAKEN WITH CONTROLS SET TO PRODUCE 40 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE.
1. DC voltage measurements taken with vacuum tube voltmeter; AC voltage measured on 1000 ohms per volt.
2. Pin numbers are counted in clockwise direction on bottom of socket.
3. Measured values are from socket pin to common negative unless otherwise stated.
4. Line Voltage maintained at 117 volts for voltage readings.
5. All controls set for normal operation; no signal applied.
A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE
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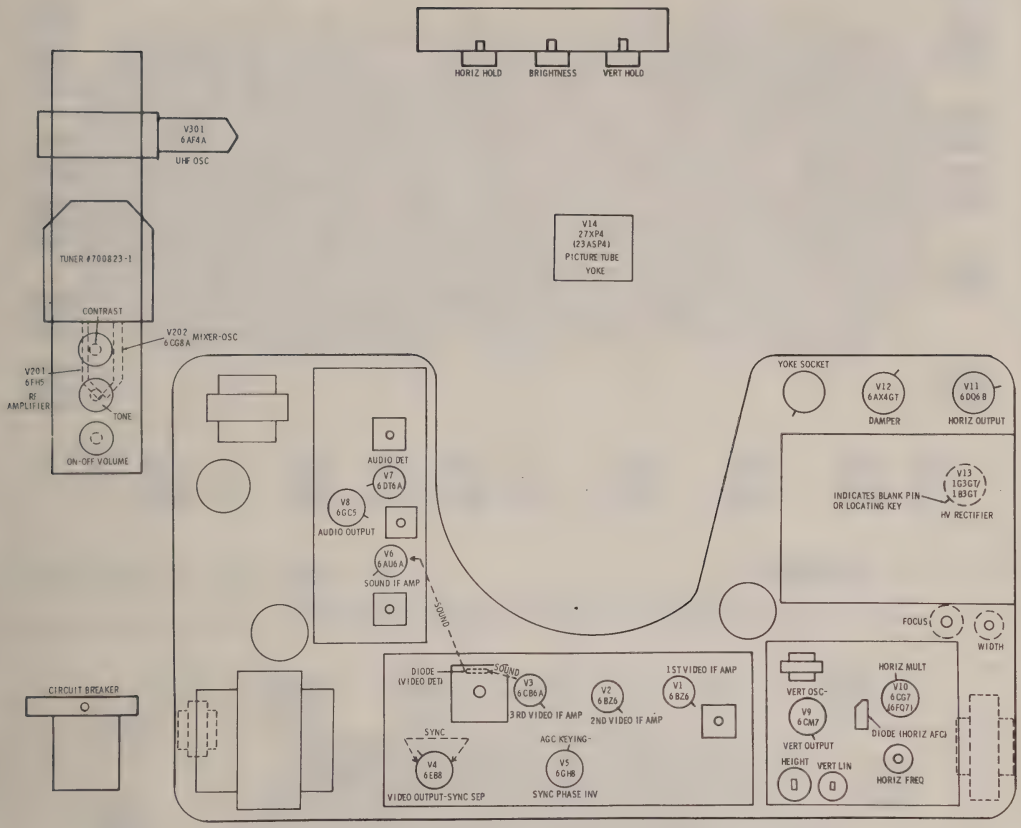
MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11

FOLDER 1

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11

TUBE PLACEMENT CHART
TOP VIEW



MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11

TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce indicated symptoms. Refer to tube placement chart for location and type of tube.

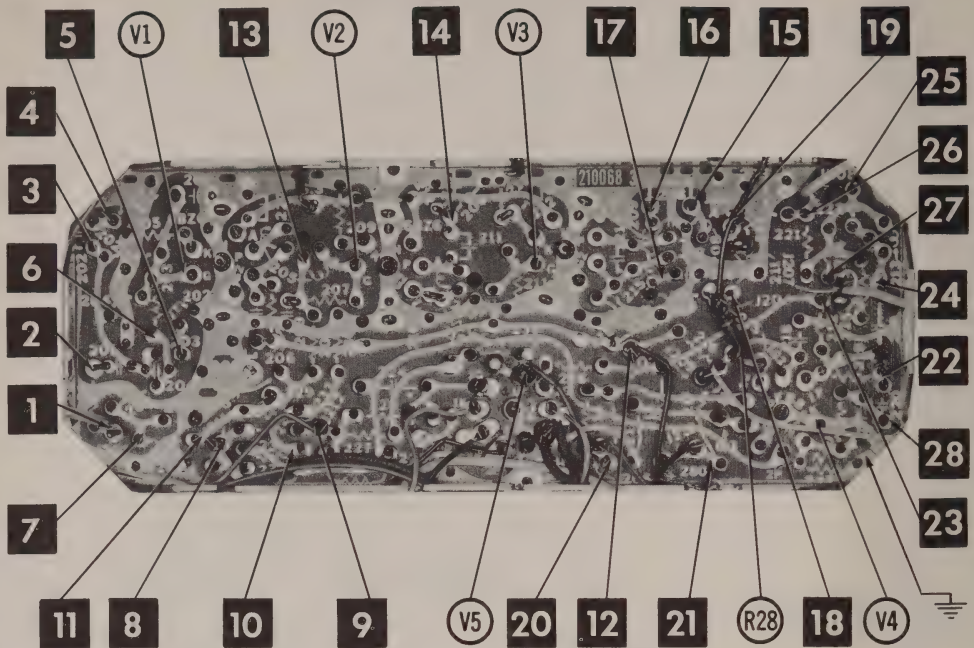
POWER SUPPLY FAILURE
No raster, no sound Circuit Breaker, Rectifiers M1, M2

SWEEP FAILURE
No raster, has sound V10, V11, V12, V13, V14
No vertical deflection V9
Poor vert. linearity or foldover V9
Poor horiz. linearity or foldover V10, V11, V12
Narrow picture V10, V11, V12, M1, M2
Vert. off freq. V9
Horiz. off freq. Diode (Horiz. AFC), V10

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster V1, V2, V3, Diode (Video Det.), V8
No pic, no sound, has snow V201, V202, V1
No pic, has sound, has raster V4, V14
Has pic, no sound V6, V7, V8
Overloaded picture V5

SYNC FAILURE
No vert. sync V4, V5
No horiz. sync V4, V5
No vert. or horiz. sync V4, V5

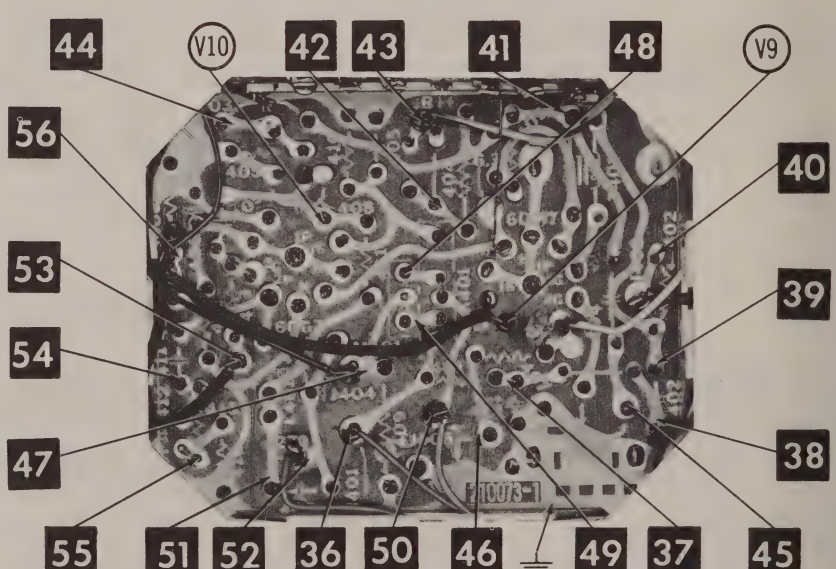
FOLDER 1



A Howard W. Sams CIRCUITRACE* Photo

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

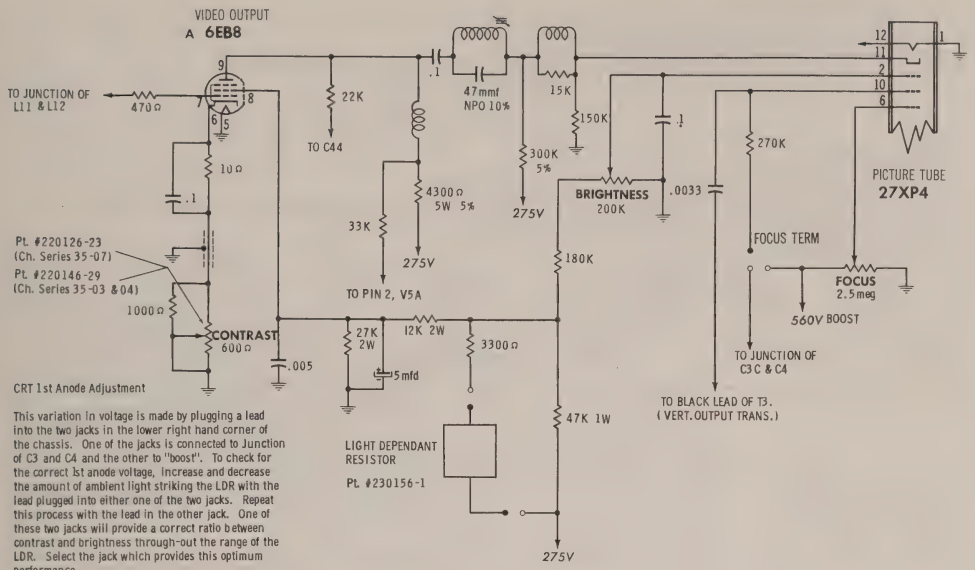
VIDEO, SYNC PRINTED BOARD



A Howard W. Sams CIRCUITRACE* Photo

SWEEP PRINTED BOARD

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



This variation in voltage is made by plugging a lead into the two jacks in the lower right hand corner of the chassis. One of the jacks is connected to Junction of C3 and C4 and the other to "boost". To check for the correct 1st anode voltage, increase and decrease the amount of ambient light striking the LDR with the lead plugged into either one of the two jacks. Repeat this process with the lead in the other jack. One of these two jacks will provide a correct ratio between contrast and brightness through-out the range of the LDR. Select the jack which provides this optimum performance.

VIDEO OUTPUT & BRIGHTNESS CIRCUITS USED IN ALL MODELS EXCEPT CHASSIS SERIES 35-01 &35-02.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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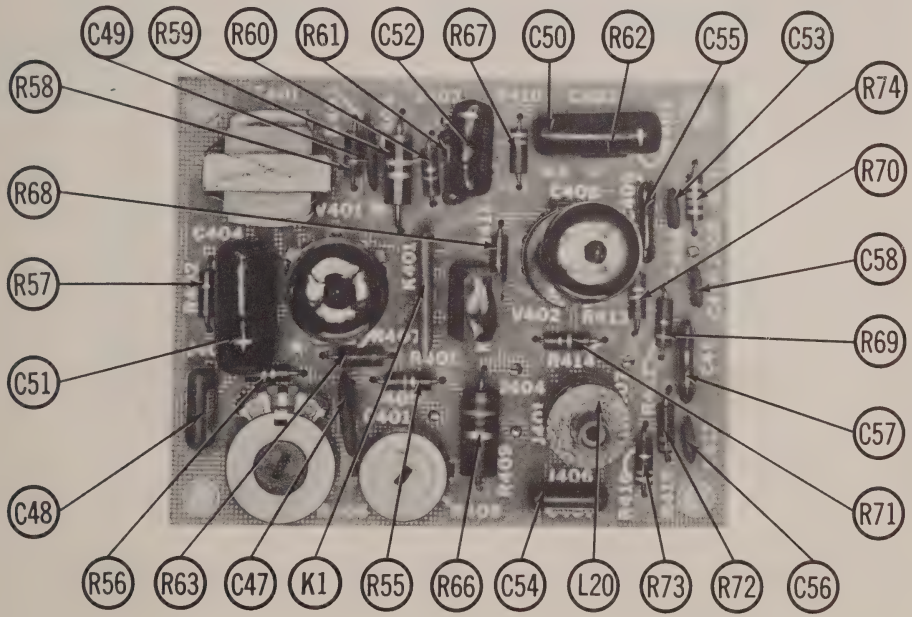
ALTERNATE VIDEO OUTPUT, BRIGHTNESS CIRCUIT



SWEEP PRINTED BOARD

SET 554 FOLDER 1

ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A1 thru A8, A10 thru A14 .... GENERAL CEMENT #8282, 8606, 8606L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545
A9 ..... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538

VIDEO IF ALIGNMENT

Connect the negative lead of a 3 volt bias supply to point Ⓐ. Positive to chassis.
Connect the negative lead of a 2.5 volt bias supply to point Ⓑ. Positive to chassis.
Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough sweep generator output to provide a usable pattern on scope.
Preset Mixer Plate Coil Slug fully counterclockwise.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	High side thru .01mfd to pin 1 (grid) of 1st Video IF. Low side to chassis.	43.0MC (10MC Swp.)	47.25MC	Any non-interfering channel	Vert. Amp. thru 10K to point Ⓒ. Low side to chassis.	A1	Adjust to place marker in trap notch as in Fig. 1. Two positions of slug will do this. Use the one with slug farthest out.
2.	"	"	42.25MC 45.0MC 45.75MC	"	"	A2, A3, A4	Check for response similar to Fig. 1. If necessary, adjust A2 for maximum gain, A3 to place 45.75MC marker at 65% on high frequency side and A4 to place 42.25MC marker at 65% on low frequency side.
3.	High side thru a .001mfd to grid of Mixer, accessible thru a hole in top of tuner. Low side to chassis.	"	"	"	"	Mixer Plate Coil	Adjust for maximum gain and symmetry of response similar to Fig. 2 with markers as shown.
4.	"	"	41.25MC	"	"	A5	Disconnect bias and ground point Ⓐ. Adjust to place marker in trap notch as in Fig. 2.
5.	"	"	39.75MC	"	"	A6	"
6.	"	"	47.25MC	"	"	A7	"
7.	"	"	45.75MC	"	"	A8, A9	Adjust for maximum gain and symmetry of response similar to Fig. 2 with markers as shown. Recheck steps 4, 5 and 6.

SOUND IF ALIGNMENT

Preset A10 fully counterclockwise. Tune the receiver to a strong local station (preferably with a test pattern and tone signal or music). Adjust A10 just past the point of maximum sound and MINIMUM distortion.
Reduce the signal input by disconnecting the antenna or connecting an adjustable pad across the antenna terminals so that with the Volume set near maximum, sound is at a low level. Set the Fine Tuning to the verge of distortion. Adjust A11, A12 and A13 for MINIMUM distortion.

4.5MC TRAP ALIGNMENT

Tune in a strong TV signal and set Contrast at maximum. Adjust the Fine Tuning until a beat pattern is visible. Adjust A14 for MINIMUM beat interference.

ALIGNMENT IDENTIFICATION PHOTO - PAGE 18

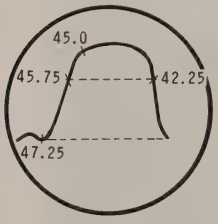


FIG. 1

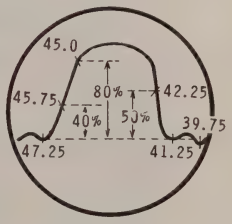
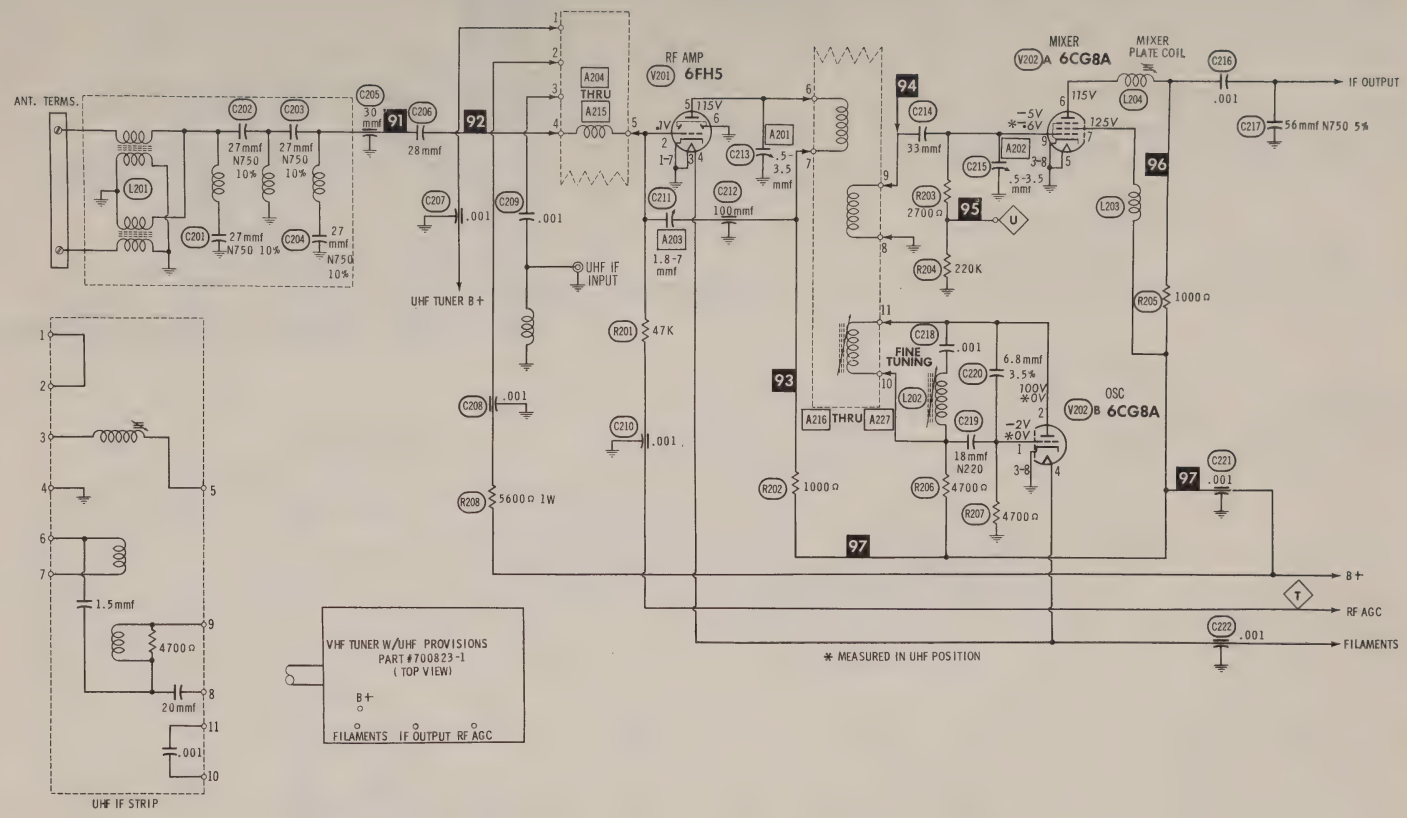


FIG. 2



A PHOTOFACT STANDARD NOTATION SCHEMATIC
with CIRCUITRACE

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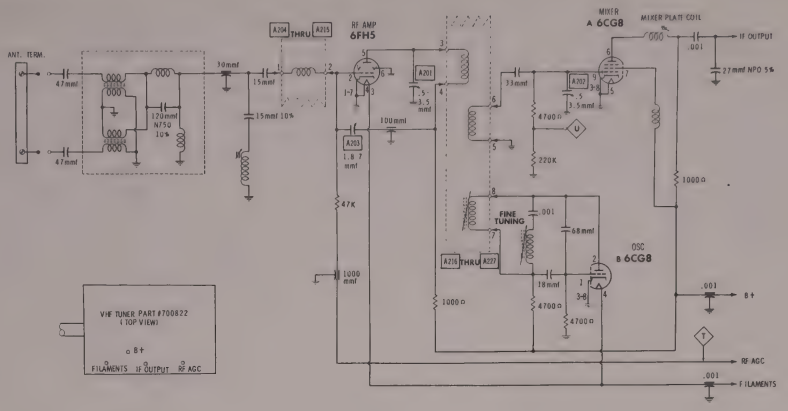
VHF TUNER (WITH UHF PROVISIONS) 700823-1

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00,
C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11



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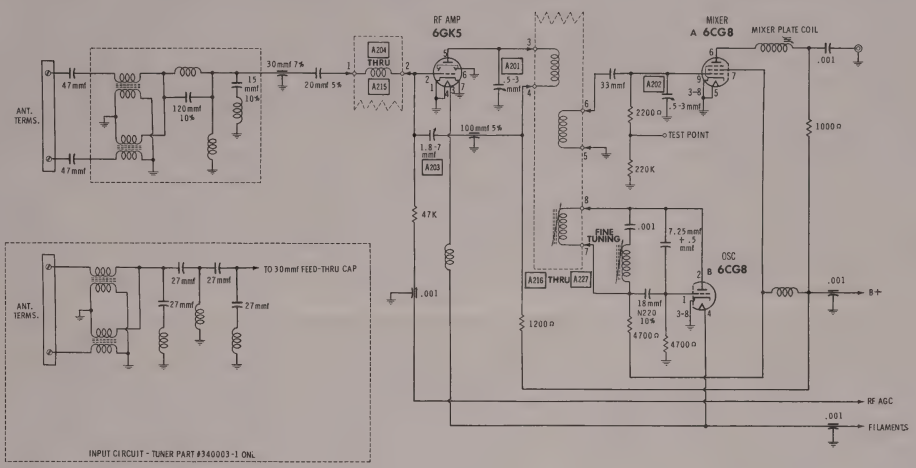
VHF TUNER 700822-1



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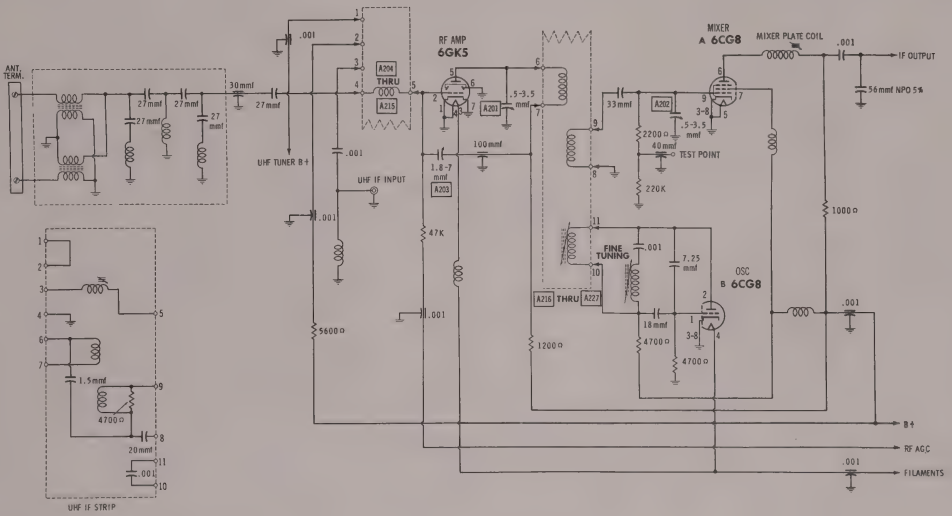
VHF TUNER 340001-1, 340003-1



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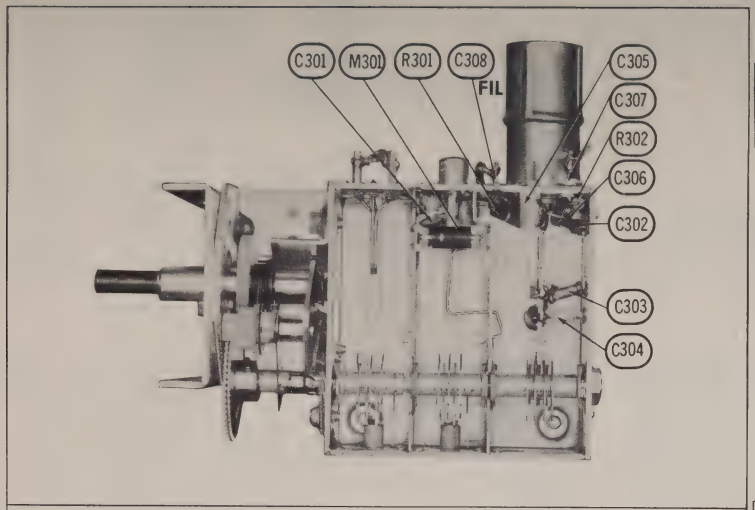
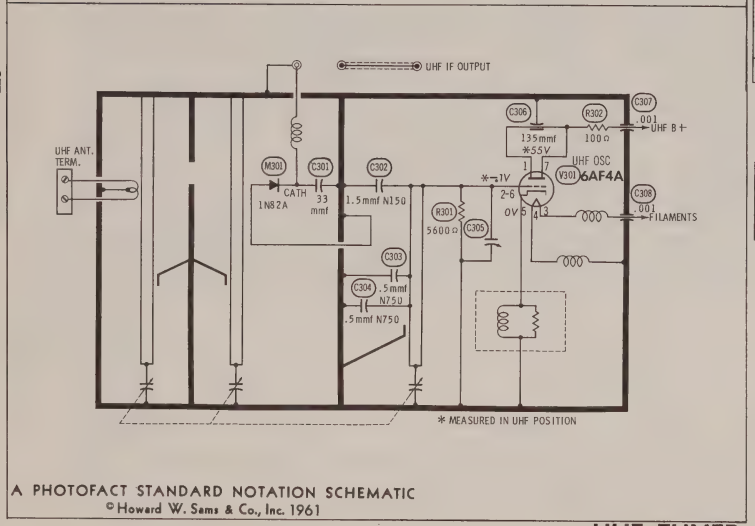
VHF TUNER (WITH UHF PROVISIONS) 340002-1

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00,
C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11





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TUNER PARTS LIST AND DESCRIPTIONS

TUBES

◆ GENERAL ELECTRIC ◆			◆ RAYTHEON ◆ SYLVANIA ◆		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V301	UHF Osc.	6AF4A			

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C301	33		NPO-DI 33	DTZ-33	C10Q33C	CCTO-330 *	CNO-433	10TCC-Q33
C302	1.5	N150						
C303	.5	N750						
C304	.5	N750						
C305								
C306	135							
C307	.001		EF-001	MFT-1000		CCF-102	CT280A	
C308	.001		EF-001	MFT-1000		CCF-102	CT280A	

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R301	5600Ω				R302	100Ω			

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		MAGNAVOX PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M301	1N82A *			1N82A	* UHF Mixer

UHF TUNER 700688-2

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
	GENERAL ELECTRIC • RAYTHEON • SYLVANIA •				
V1	1st Video IF Amp.	6BZ6	V7	Audio Detector	6DT6A
V2	2nd Video IF Amp.	6BZ6	V8	Audio Output	6GC5
V3	3rd Video IF Amp.	6CB6A	V9	Vert. Osc. – Vert. Output	6CM7
V4	Video Output – Sync Sep.	6EB8	V10	Horiz. Mult.	6CQT (6FQT) *
V5	AGC Keying – Sync Phase Inverter	6GH8	V11	Horiz. Output Damper	6DQ6B 6AX4GT
V6	Sound IF Amp.	6AU6A	V12		
			V13	HV Rectifier	1G3GT/1B3GT

*Alternate

PICTURE TUBE

ITEM No.	REPLACEMENT DATA					NOTES
	MAGNAVOX PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
V14	27XP4		27XP4 ① 23ASP4 *		27XP4 ②	① Aluminized ② Silver Screen "85"

* Used in Chassis C/U/V35-01-00, C/U/V35-03-00, C/U/V35-04-00.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT	MAGNAVOX PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	130	200	270021-88	AFH1-31-75	XA0315	XC1-15	FH140.5 FP330.29 TC1265	TMS-1560	TVLS-1470 *
C2A	▬130	200	270021-90						
B	▬5	350							
C	▬100	200							
C3A	▬70	350	270021-89	AFH4-56-35					TVL-2633
B	▬30	350							TVA-2743
C	▬20	350							
D	50	50							
C4	20	350	270027-20	PRS1735	BR2035	QT1-9	TC65	TD-20-350	TVA-1608
C5	20	350	270027-20	PRS1735	BR2035	QT1-9	TC65	TD-20-350	TVA-1608

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

ITEM No.	RATING		REMARKS	REPLACEMENT DATA					
				AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C6	.22	200V		P288N-22					
C7	.220	10%		DI-220	DD-221	CUB2P22	2DP-4-224	GEM-2022	2TM-P22
C8	11	NPO 5%		NPO-DI 10	DT2-10	C10Q2C	CCTO-100	CNO-410	10TCC-Q10
C9	12	NPO 5%			DT2-12	C10Q2C	CCTO-120	CNO-412	10TCC-Q12
C10	20	NPO 5%			DT2-20	C10Q2C	CCTO-200	CNO-422	10TCC-Q20
C11	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C12									
C13	800	10%		DI-820	DD-801	5RST8	CCD-801	GP382	10TS-T80
C14	680			DI-680	DD-681	BYA10T68	CCD-681	B-368	10TS-T68
C15	680			DI-680	DD-681	BYA10T68	CCD-681	B-368	10TS-T68
C16	680			DI-680	DD-681	BYA10T69	CCD-681	B-368	10TS-T68
C17	.22	200V		P288N-22		CUB2P22	2DP-4-224	GEM-2022	2TM-T22
C18	.82	NPO 5%	#250088-184						
C19	800	10%		DI-820	DD-801	5RST8	CCD-801	GP382	10TS-T80
C20	20	NPO 5%			DT2-20	C10Q2C	CCTO-200	CNO-422	10TCC-Q20
C21	800	10%		DI-820	DD-801	5RST8	CCD-801	GP382	10TS-T80
C22	.0015			BPD-0015	DD-153	BYA10D15	CCD-152	B-215	5HK-D15
C23	8.2	NPO 5%		NPO-DI 8.2		C10Q82C			10TCC-V82
C24	1	10%		NPO-SI 1.0	TC2-1			CNO-510	10TCC-V10
C25	3.3	10%		NPO-DI 3.3	DT2-3R3	C10V33C	CCTO-3R3	CNO-533	10TCC-V33
C26	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C27	.1	200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C28	.1	400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C29	47	NPO 10%		NPO-DI 47	DT2-47	C10Q47C	CCTO-470	CNO-447	10TCC-Q47
C30	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C31	.0033			BPD-0033	DD-332	BYA10S33	CCD-332	B-233	5HK-D33
C32	.001	200V		HVD30-1000	DD30-102	HVB2D1X	2CCD-102	2HV-210	BL-D10
C33	.0027	5%				1R5D27	CM-20B-272J	MCJ460.5	6PS-D27
C34	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C35	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C36	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C37	.02			BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C38	.220			DI-220	DD-221	L10T22	CCD-221	B-122	10TS-T22
C39	.01			BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C40	.001		Note 1	BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C41	.002			BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C42	.002			BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C43	470			DI-470	DD-471	BYA10T47	CCD-471	B-347	10TS-T47
C44	.002			BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C45	150			1468-00015	TCZ-150	5W5TS1	CM-15B-151M	MC236	1FM-315
C46	.1	400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C47	.0075			DI-7500	DD-752	L06D75	6DP-2-752	P2875	10TS-D75
C48	.0051	400V 5%				1R5D51	CM-20B-512J		MS-251
C49	.0047			BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C50	.047	200V 10%		V84C2847-10%		PM2S47	4DP-3-473	GEM-1615	2TM-S47
C51	.1	400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C52	.047	400V 10%		V84C4847-10%		PM4S47	4DP-3-473	GEM-1615	4TM-S47
C53	680	10%		DI-680	DD-681	5RST68	CCD-681	GP368	10TS-T68
C54	.0039	200V 10%		P86D4		P86D1-392	GEM-1624	6PS-D39	
C55	360	5%		1468-00036		5RST36	CM-19B-361J		MS-336
C56	.001			BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C57	430	5%		1468-00043		5RST43	CM-19B-431J		MS-343
C58	.001			BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C59	.047	400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	4TM-S47
C60	.047	600V		P688N-047	DD-503	CUB6S47	6DP-3-473	GEM-6147	6TM-S47
C61	68K	2000V N750 10%	#250175-22						
C62	.1	600V		P688N-1	DF-104	CUB6P1	6DP-4-104	GEM-601	6TM-P10
C63	.01	1400V		DAC-27	DD6-103	HVE16S1	16DP-3-103	UAC-110	BL-S10

Magnavox Part Number

Note 1. Not used in some versions.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	MAGNAVOX PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS–IRC PART No.	MALLORY PART No.	
R1A	1meg	½	230135-1	B2L–70	C47B-1meg-Z	B13–137 *	P29BA	Loudness
B	Shaft			Not Req.	F8-3	Not Req.	Not Req.	
C	Switch			Not Req.	Not Req.	SK7 *	Not Req.	Push-Pull Off-On
R2A	3meg	½	230146-26	B-85	A47-3meg-Z	B11-140	U57	Tone Note 1
B	Shaft			Not Req.	K8B-3	TM4	Not Req.	
R3A	600Ω	½	230126-72	B-415	A47-750-S	QT7-105	U3	Contrast
B	Shaft			Not Req.	F8-3	Not Req.	Not Req.	
R4A	50K	½	230146-9	TT-21	B47-50K-S	B11-123	PTA54L	Horiz. Hold
B	Shaft			Not Req.	Not Req.	TM4	Not Req.	
R5A	200K	½	230146-10	TT-46	B47-200K-S	B11-129	U43	Brightness
B	Shaft			Not Req.	Not Req.	TM4	Not Req.	
R6A	1.6meg	½	230146-11	TT-742	B47-1.5meg-S	B11-138	PTA26L	Vert. Hold
B	Shaft			Not Req.	Not Req.	TM4	Not Req.	
R7	2.5meg	½	230166-1					Vert. Height
R8	3000Ω	2(WW)	220167-1			110-3000	PFL-3K	Vert. Linearity
R9	2.5meg	½	220146-18	TT-83	B47-2.5meg-S	HLC-2	SU-565	Focus Note 2

Note 1. Not used in some versions.

Note 2. Not used in Chassis C/U/V35-01-00.

* Factory Assembled Part #PPQ13-137 (SKT).

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R10	10Ω				R48	470K			
R11	9.1meg 5%				R49	4.7meg			
R12	820K 5%				R50	1.5meg			
R13	330K 5%				R51	1meg			
R14	56K 5%				R52	33K			
R15	470K				R53	3900Ω 5%			
R16	15K				R54	3900Ω 5%			
R17	15K				R55	82K			
R18	1500Ω				R56	100K			
R19	47Ω				R57	2meg 5%			
R20	27K				R58	22K			
R21	1500Ω				R59	820K 1W			
R22	1500Ω				R60	820K			
R23	47Ω				R61				#230130-2
R24	27K				R62	10K 5%			
R25	1500Ω				R63	1000Ω			
R26	120Ω				R64	270Ω			
R27	3900Ω 5%				R65	270Ω			
R28	470Ω				R66	180 2W			
R29	22K				R67	4.7meg			
R30	68K 1W				R68	6200Ω 5%			
R31	4300Ω 5% 5W	PW5-4300	5W-SQ-4300		R69	1300Ω 5%			
R32	22K				R70	100K			
R33	120K 5%				R71	120K 5%			
R34	270K				R72	68000			
R35	15K				R73	4700Ω			
R36	33K				R74	470K			
R37	270K				R75	10000			
R38	15K				R76	8200Ω 5% 5W	PW5-8200	5W-SQ-8200	
R39	270Ω				R77	8200Ω			
R40	6.8meg				R78	3300Ω 2W			
R41	6800Ω				R79	390K			(270K) *
R42	680Ω				R80	390K			(270K) *
R43	1meg 5%				R81	82000			
R44	1.2meg 5%				R82	4.7Ω 1W			
R45	680Ω 1W				R83	15K			
R46	3300Ω				R84	50Ω 5% 10W	PW10-5	10W-SQ-5	
R47	220Ω 3W	PW3-220	3W-SQ-220		R85	1meg			

* Value used in Chassis C/U/V35-01-00.

Magnavox Part Number

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MAGNAVOX PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	41.25MC Trap	360843-1					
L2	39.75MC Trap	360850-1					
L3	47.25MC Trap	360842-1					
L4	1st Video IF	360848-1					
L5	2nd Video IF	360849-1					
L6	47.25MC Trap	360842-1					
L7	3rd Video IF	360849-2					
L8	4th Video IF	360849-3					
L9	RF Choke (6.3uh)	360852-2	BC-565	4610	RTC-8520	T859	
L10	RF Choke (2.4uh)	360852-3	BC-563	4606	RTC-8517	T857	
L11	RF Choke (10uh)	360852-1	BC-566	4612	RTC-8522	T860	
L12	Peaking (278uh)	360853-1	TV-196	6130	RTC-8576	T347	
L13	Peaking (400uh)	360853-2	TV-202	6136	RTC-8579	T351	
L14	4.5MC Trap	360851-1					
L15	Peaking (120uh)	360853-3	TV-195	6153	RTC-8585	T342	
L16	1st Sound IF	360845-1					
L17	2nd Sound IF	360846-1					
L18	Quadrature	360847-1					
L19	RF Choke (3.3uh)	360801-8 ①	BC-564	4608	RTC-8518	T816	① IRC Part #CLA.

COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA							NOTES
		MAGNAVOX PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	Workman TV PART No.	
L20	Horiz. Stabilizer	360854-1				HS-16			
L21	Width Coil	360862-1			WC-5				

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE @ CURRENT 1000 ~/s	MAGNAVOX PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
L22	.240A	40Ω	.85 Hy.	320089-2		C-2343		C-36X	

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC 1	SEC 2	MAGNAVOX PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V ③ 1.4A	120V ③ .770A AC	6.3V ③ 6.6A	300186-1				R-124BC ①	① Use MB-21 mounting kit.

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MAGNAVOX PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	Vert. Blocking Osc.	320392-1					① Requires new rear cover & centering device. ② Use original vertical damping network. ③ Add leads to yoke terminals #6 & #8, and yoke terminals #2 & #7. Connect same as original. † Chassis Series 35-01.
T3	Vert. Output	320265-4					
T4	Yoke (Horiz. 21MH) (90°) (Vert. 43MH) Yoke Rear Cover and Centering Device	700703-5* (360687-1) 700703-6 † 360771-1	MDF-92 ①②③	DY-16A ①②③	Y-16 ①②③	Y-41 & NW2 YC-112	
T5	Horiz. Output Alt. Horiz. Output	360881-1 380881					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MAGNAVOX PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T6	4000Ω	3-4Ω	230279-3		A-3825 ①	24S83 ①	S-54X	① Drill new mounting hole(s).

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	MAGNAVOX PART No.	QUAM PART No.	
SP1	4" x 8"	P.M.	3-4Ω	584012	48A2	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	MAGNAVOX PART No.	REPLACEMENT DATA
K1	AFC Network	.001mfd, .001mfd, .0047mfd, 100K, 100K, 470K	250377-1	

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA				NOTES
	CURRENT (Measured)	MAGNAVOX PART No.	RCA PART No.	SARKES TARZIAN PART No.		
M1	.240A	530051-2	1N1763	40H		
M2	.240A	530051-2	1N1763	40H		

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		MAGNAVOX PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M3		530045-3 *	6GD1 *	1N295 *	* Dual Selenium, Series Connected * Video Detector
M4	1N60	530065-1 *			

MISCELLANEOUS

ITEM No.	PART NAME	MAGNAVOX PART No.	NOTES
M5	Tuner	340001-1	VHF, STANDARD COIL REPLACEMENT #GG-4220A
		340002-1	VHF (with UHF Provisions)
		340003-1	VHF (Adaptable to UHF with Strips)
		340007-1	VHF
		340008-1	VHF (with UHF Provisions)
		340009-1	VHF (Adaptable to UHF with Strips)
		340010-1	VHF (with UHF Provisions)
		700822-1	VHF
		700823-1	VHF (with UHF Provisions)
		700688-2	UHF
M6	Circuit Breaker	180672-1	

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

WIRING DATA

High Voltage Lead	Use BELDEN No. 8888
Shielded Hook-up Wire	Use BELDEN No. 8885 (Single Conductor) 8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8534 (Stranded) Available in Ten Colors
Power Cord (Interlock Type)	Use BELDEN No. 8874
300Ω Tuner Input Lead	Use BELDEN No. 8888
300Ω Antenna Lead-in	Use BELDEN No. 8230 or 8275
Antenna Rotor Cable	Use BELDEN No. 8464 (Flat) or 8484 (Round) – 4 Conductor 8485 (Round) – 5 Conductor 8486 (Round) – 8 Conductor

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11

FOLDER 1

VHF TUNER ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A201 thru A212 ..... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8987
WALSCO #2531
A213, A214, A215..... GENERAL CEMENT #5000, 5003, 8276, 8290
WALSCO #2512, 2525

VHF RF AND MIXER ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough sweep generator output to provide a usable pattern on scope.
Use 10MC sweep unless otherwise noted.
Coils not containing adjustable cores are adjusted by expanding or compressing coil turns.
Connect the negative lead of a 4.5 volt bias supply to point ⓣ. Positive to chassis.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
2.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	195MC	193.25MC 197.75MC	10	Vert. Amp. thru 10K to point ⓓ. Low side to chassis.	A201, A202, A203	Adjust A201 and A202 for maximum amplitude and symmetry with markers as shown in Fig. 201. Increase bias for MINIMUM amplitude of response curve. Without changing the bias adjust A203 to obtain MINIMUM response on the scope.
3.	"	"	213MC	211.25MC 215.75MC	13	"	A204	Adjust for maximum amplitude of response similar to Fig. 201. Adjust by compressing or expanding coil turns.
			207MC	205.25MC 209.75MC	12		A205	
			201MC	199.25MC 203.75MC	11		A206	
			195MC	193.25MC 197.75MC	10		A207	
			189MC	187.25MC 191.75MC	9		A208	
			183MC	181.25MC 185.75MC	8		A209	
			177MC	175.25MC 179.75MC	7		A210	
			85MC	83.25MC 87.75MC	6		A211	
			79MC	77.25MC 81.75MC	5		A212	
			69MC	67.25MC 71.75MC	4		A213	
			63MC	61.25MC 65.75MC	3		A214	
			57MC	55.25MC 59.75MC	2		A215	

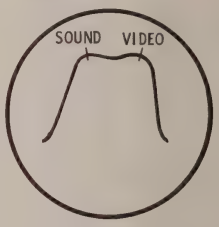


FIG. 201

VHF OSCILLATOR ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough sweep generator output to provide a usable pattern on scope.
Use 10MC sweep unless otherwise noted.
Connect variable bias to IF AGC line. Adjust bias to obtain response curve which shows no indication of overloading.
Set the Fine Tuning to the center of its range.

	DUMMY ANTENNA	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	Two 120Ω Carbon Resistors	Across antenna terminals with 120Ω in each lead.	213MC	211.25MC 215.75MC	13	Vert. Amp. thru 47K across Video Det. load.	A216	Adjust to place sound marker in trap notch as in Fig. 202. Video marker should fall at 50%.
			207MC	205.25MC 209.75MC	12		A217	
			201MC	199.25MC 203.75MC	11		A218	
			195MC	193.25MC 197.75MC	10		A219	
			189MC	187.25MC 191.75MC	9		A220	
			183MC	181.25MC 185.75MC	8		A221	
			177MC	175.25MC 179.75MC	7		A222	
			85MC	83.25MC 87.75MC	6		A223	
			79MC	77.25MC 81.75MC	5		A224	
			69MC	67.25MC 71.75MC	4		A225	
			63MC	61.25MC 65.75MC	3		A226	
			57MC	55.25MC 59.75MC	2		A227	

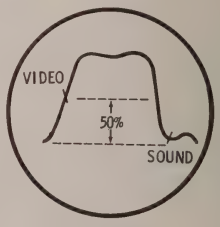
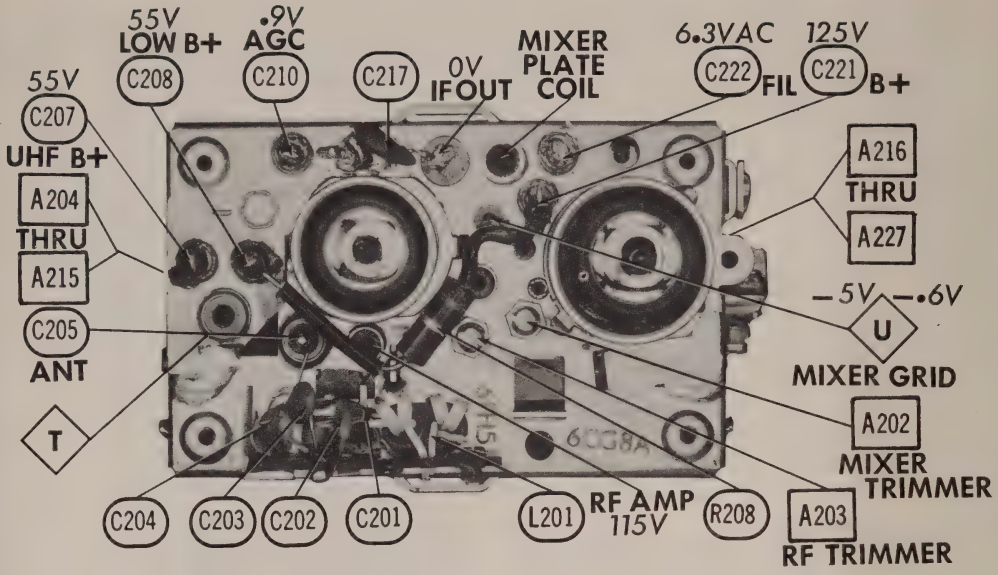
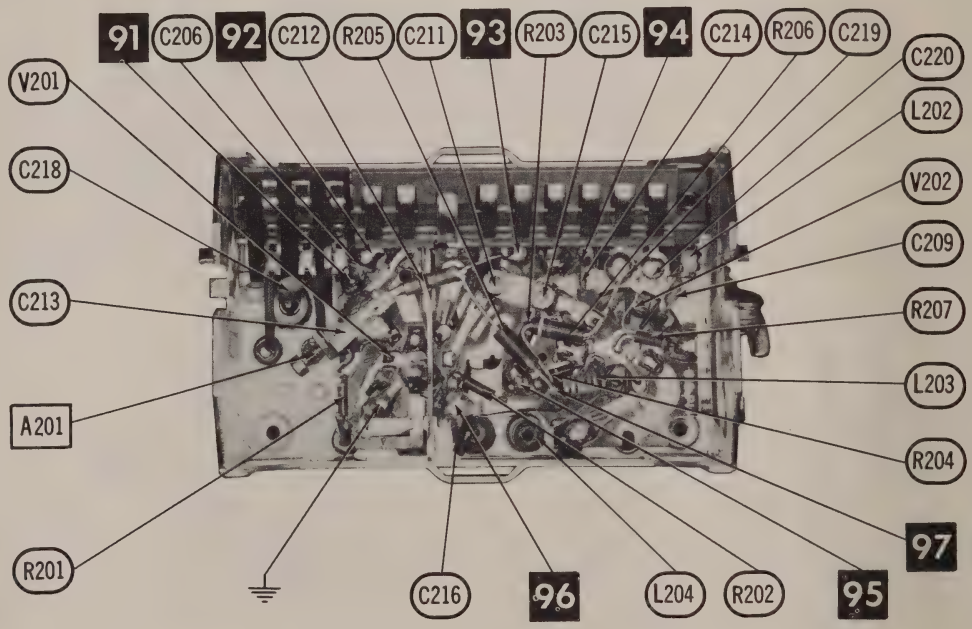


FIG. 202



VHF TUNER 700823-1 - TOP VIEW



A Howard W. Sams CIRCUITRACE Photo

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED

VHF TUNER 700823-1 - BOTTOM VIEW

VHF TUNER PARTS LIST AND DESCRIPTIONS

700823-1

TUBES

• GENERAL ELECTRIC •			RAYTHEON • SYLVANIA •		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	6FH5	V202	Mixer-Osc.	6CG8A

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	27 N750 10%		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
C202	27 N750 10%		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
C203	27 N750 10%		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
C204	27 N750 10%		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
C205	30	#250279-1						
C206	28			DTZ-27	C10Q27C	CCTO-270	CNO-428	10TCC-Q27
C207	.001		EF-001	MFT-1000		CCF-102	CT280A	
C208	.001		EF-001	MFT-1000		CCF-102	CT280A	
C209	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C210	.001		EF-001	MFT-1000		CCF-102	CT280A	
C211	1.8-7	#250145-3		829-7				
C212	100		EF-0001	MFT-100				
C213	.5-3.5	#260144-2						
C214	33		NPO-DI 33	DTZ-33	C10Q33C	CCTO-330	CCTO-330	10TCC-Q33
C215	.5-3.5	#260144-2						
C216	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C217	56 N750 5%			TCN-56	C10Q56C	CCTN-560		10TCU-Q56
C218	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C219	18 N220	#250287-1				*		10TCR-Q18
C220	6.8 3.5%		NPO-DI 6.8	DTZ-6R8	C10V68C	CCTO-6R8	CNO-568	10TCC-V68
C221	.001		EF-001	MFT-1000		CCF-102	CT280A	
C222	.001		EF-001	MFT-1000		CCF-102	CT280A	

Magnavox Part Number
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

RESISTORS

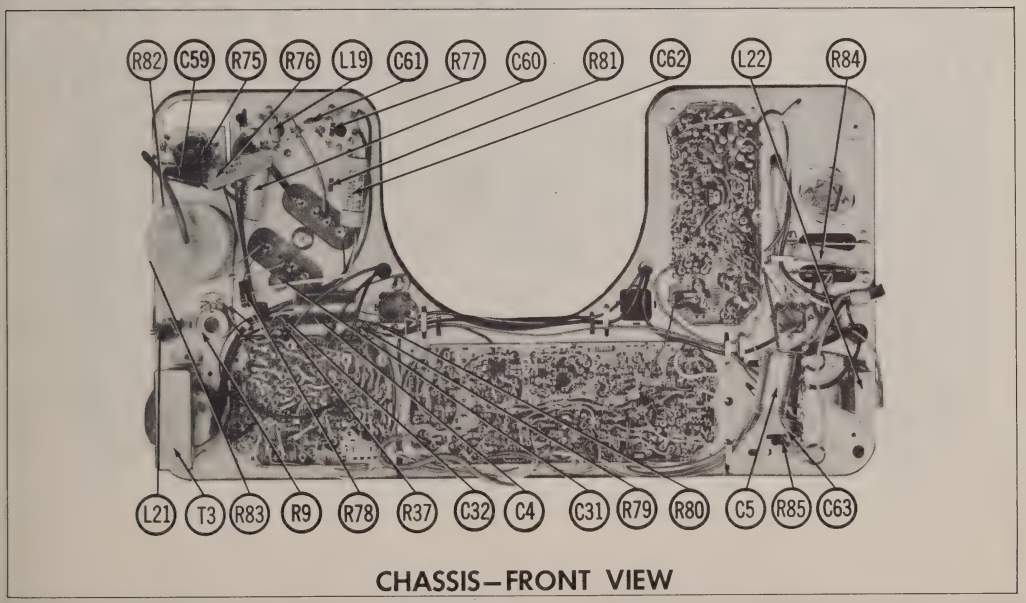
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R201	47K				R205	1000Ω			
R202	1000Ω				R206	4700Ω			
R203	2700Ω				R207	4700Ω			
R204	220K				R208	5600Ω 1W			

COILS (RF-IF)

ITEM No.	USE	MAGNAVOX PART No.	NOTES
L201	Ant. Trans.	360814-1	Includes Input Assembly
L202	Fine Tuning	360811-1	

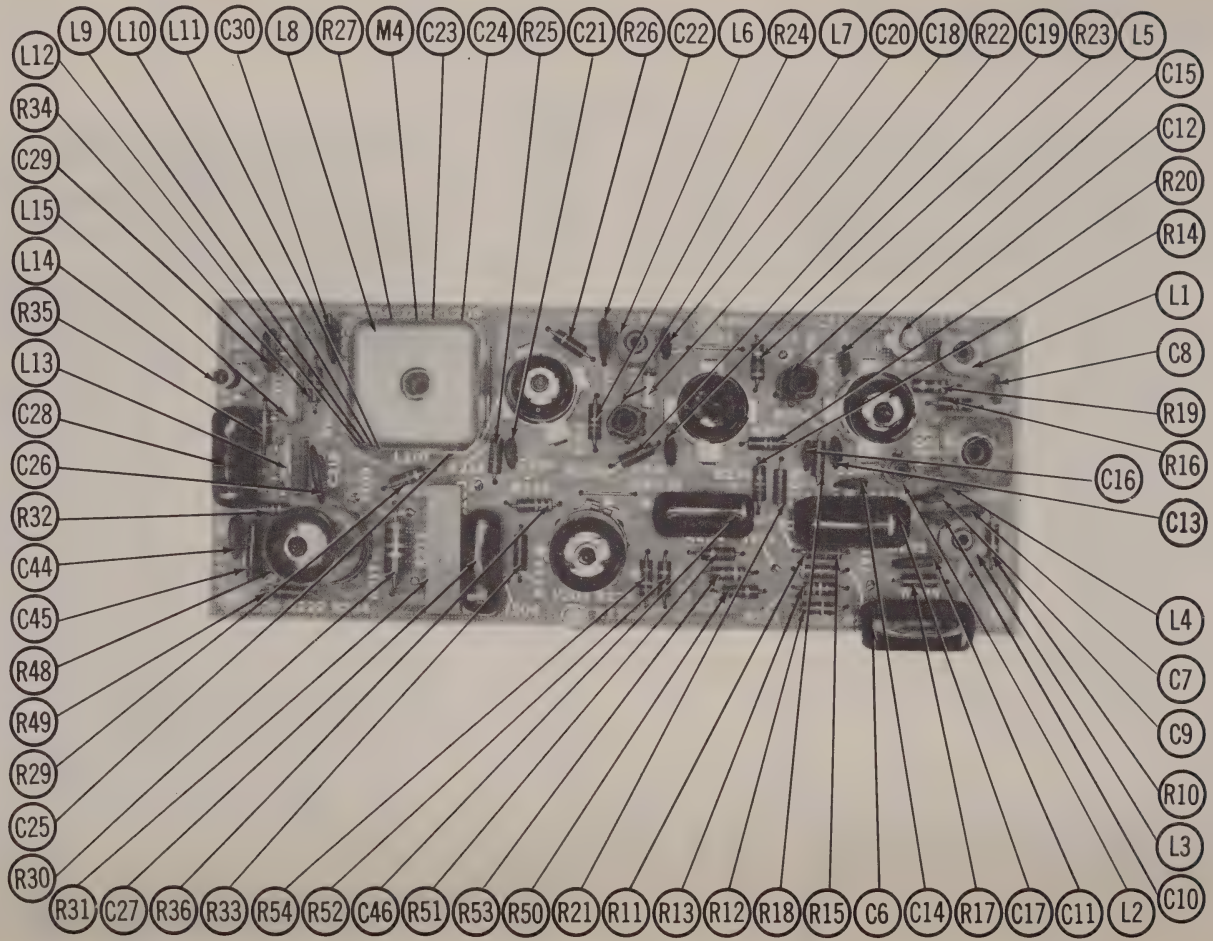
ITEM No.	USE	MAGNAVOX PART No.	NOTES
L203	RF Choke	360810-1	
L204	Mixer Plate	360765-2	



CHASSIS—FRONT VIEW

MAGNAVOX CHASSIS C/U/V35-01-00, C/U/V35-02-00, C/U/V35-03-00, C/U/V35-04-00, C/U/V35-07-00, C/U/V35-07-11

FOLDER 1



VIDEO, SOUND PRINTED BOARD

SOUND PRINTED BOARD

RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BZ6	530K	47Ω	FIL	FIL	▪1500Ω	▪1500Ω	0Ω		
V2	6BZ6	500K	47Ω	FIL	FIL	▪1500Ω	▪1500Ω	0Ω		
V3	6CB6A	.1Ω	120Ω	FIL	FIL	▪1500Ω	▪1500Ω	0Ω		
V4	6EB8	0Ω	4.7meg	†1.5meg	FIL	FIL	●50Ω	4200Ω	▪¶ 20K	†4300Ω
V5	6GH8	†4400Ω	†37K	†3300Ω	FIL	FIL	370K	†40Ω	3900Ω	30K
V6	6AU6A	7Ω	0Ω	FIL	FIL	▪15K	▪15K	270Ω		
V7	6DT6A	3.5Ω	680Ω	FIL	FIL	†270K	▪6800Ω	470K		
V8	6GC5	†3500Ω	TP	¶400K	FIL	FIL	TP	¶ 70K	†3500Ω	†465Ω
V9	6CM7	†1720Ω	NC	0Ω	FIL	FIL	†1.2meg	●2.7meg	●2meg	●2000Ω
V10	6CG7	†6900Ω	700K	1300Ω	FIL	FIL	†120K	●120K	1300Ω	0Ω
V11	6DQ6B	NC	FIL	NC	†9200Ω	470K	TP	FIL	0Ω	TOP CAP †23Ω
V12	6AX4GT	TP	NC	¶500K	NC	†42Ω	TP	FIL	FIL	
V13	1G3GT / 1B3GT		PINS	1 THRU 8	HAVE	INFINITE	RESISTANCE			TOP CAP †370Ω
V14	27XP4	FIL	0Ω	Pin 6 ●†800K	Pin 10 †270K	Pin 11 ●300K	Pin 12 FIL			
V201	6FH5	0Ω	1meg	FIL	FIL	▪1000Ω	0Ω	0Ω		
V202	6CG8A	4700Ω	▪4700Ω *▪ INF	0Ω	FIL	FIL	▪1000Ω	▪0Ω	0Ω	220K
V301	6AF4A	*▪5700Ω	5600Ω	FIL	FIL	.1Ω	5600Ω	*▪5700Ω		
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

ALL MEASUREMENTS MADE WITH TUNER IN "VHF" POSITION UNLESS OTHERWISE DESIGNATED.

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.

● THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.

* MEASURED WITH TUNER IN "UHF" POSITION.

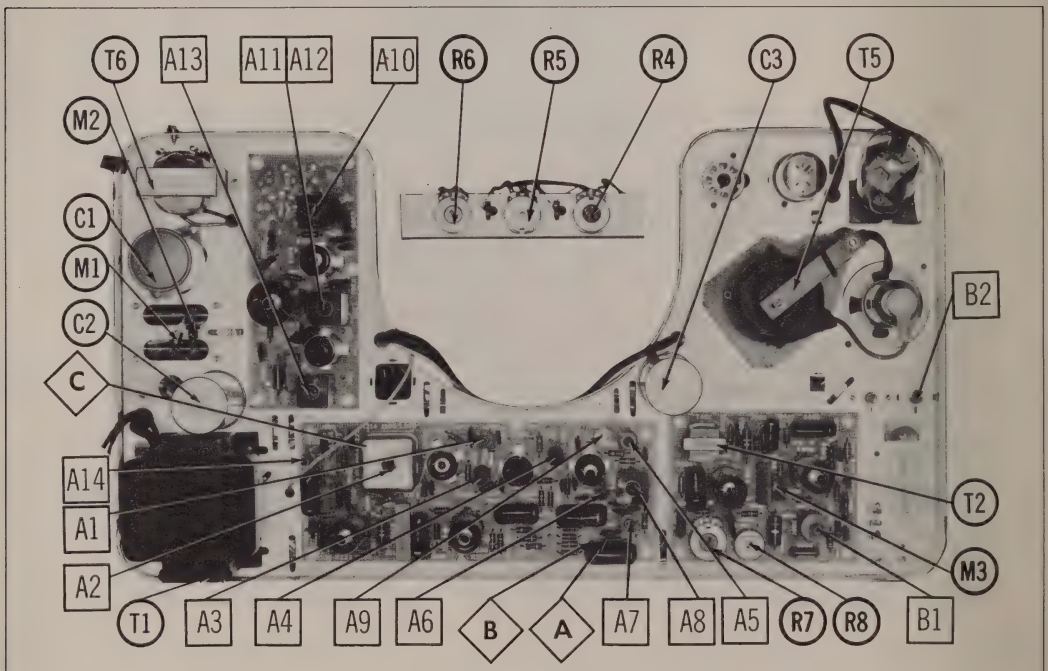
† MEASURED FROM OUTPUT OF M1.

NC NO CONNECTION

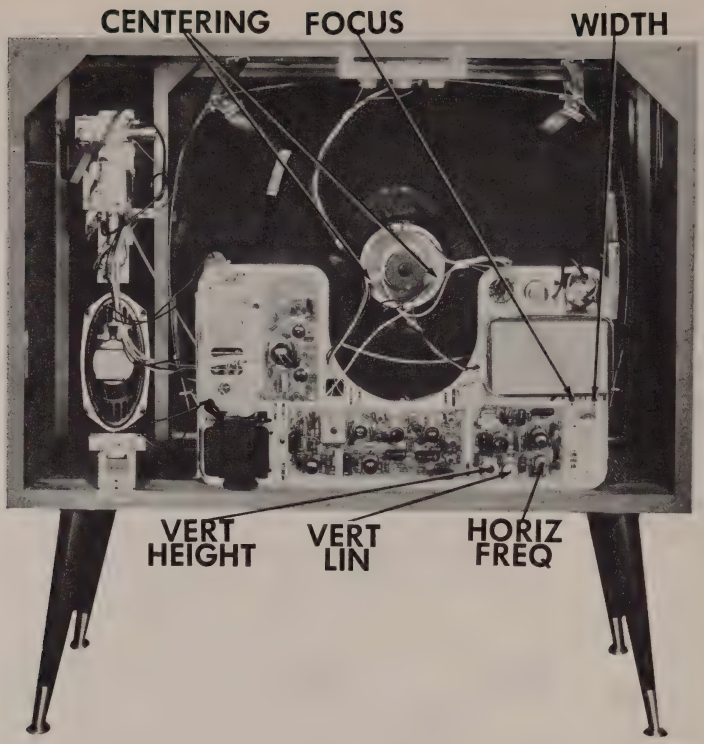
† MEASURED FROM PIN 3 OF V12.

▪ MEASURED FROM PIN 7 OF V8.

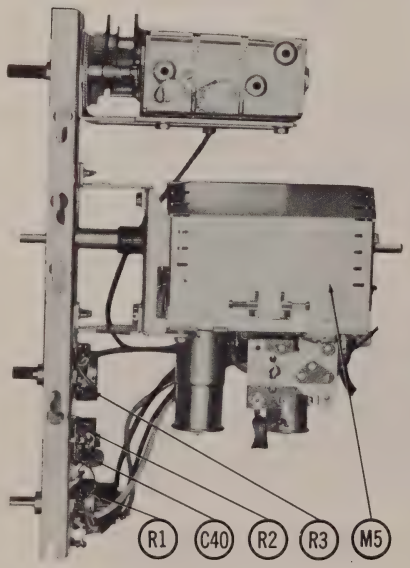
TP TIE POINT



CHASSIS—REAR VIEW



CABINET—REAR VIEW



VHF TUNER—CONTROL PANEL

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Set the Horizontal Hold Control to the center of its range. Adjust the Horizontal Frequency Slug (B1) until the picture synchronizes horizontally. Keep turning B1 in the same direction until the picture just falls out of sync. Reverse the direction of rotation until the picture just falls into sync. Rotate the Horizontal Hold Control to both extreme ends of rotation. The picture should either stay in sync at both ends of rotation or should fall out of sync by an equal number of bars at each end. If neither of these conditions occur, repeat procedure.

Adjust the Width Coil Slug (B2) for a picture slightly wider than necessary to fill the picture mask horizontally.

SERVICE NOTE

Most components are accessible at rear of chassis by removing rear cover of cabinet.
For access to Printed Board (wiring side) of chassis, remove chassis bolts (except one on extreme left side) and chassis will then swing out.

PHOTOFACT® Folder

OLYMPIC CHASSIS KB, KBU, KC, KCU, KD, KDU, KRB, KRD

OLYMPIC CHASSIS KB, KBU, KC, KCU, KD, KDU, KRB, KRD

IMPORTANT FILING NOTICE

The TV Folder for this envelope will be found among the first folders in this complete Set of folders.

Merely insert the corresponding folder on this model in this envelope to retain proper filing and indexing order.

MODEL KC366

OLYMPIC CHASSIS KB, KBU, KC, KCU, KD, KDU, KRB, KRD

SET 554 FOLDER 2

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1961 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

PHOTOFACT® Folder

OLYMPIC CHASSIS KB, KBU, KC, KCU, KD, KDU, KRB, KRD

OLYMPIC CHASSIS KB, KBU, KC, KCU, KD, KDU, KRB, KRD

MODEL KC366

TRADE NAME	OLYMPIC MODELS	TV Chassis	Radio Chassis	VHF Tuner	VHF-UHF Tuner
	CB336, CB337, CB338, CB455, TB331	KB		CL26726	
	CB336U, CB337U, CB338U, CB455U, TB331U	KBU			CL26405
	KB362, KBS362	KB	146 or 156	CL26726	
	KB362U, KBS362U	KBU	146 or 156		CL26405
	KC366, KC368, KC369, KC370, KC373, KC467	KC	158 or 159 or 160	CL27161-2	
	KC366U, KC368U, KC369U, KC370U, KC373U, KC467U	KCU	158 or 159 or 160		CL27183
	CD342, CD344, CD345, CD346, CD347	KD		CL26726	
	CD342U, CD344U, CD345U, CD346U, CD347U	KDU			CL26405
	KD363, KD365, KD375	KD	158 or 159 or 160	CL26726	
	KD363U, KD365U, KD375U	KDU	158 or 159 or 160		CL26405
	CRB339, TRB334	KRB	(With Remote Control)		
	KRD380, KRD381	KRD	(With Remote Control)		

MANUFACTURER	Olympic Radio & Television Inc., Division of the Siegler Corp., 34-01 38th Ave., Long Island City 1, N. Y.
TUBES	TV: VHF - Fifteen, UHF - Sixteen AM Radio 146: Five FM-AM Radio 156: Six Remote Control Receiver: Three
TRANSISTOR	Remote Control Transmitter: One
POWER SUPPLY	105-120 Volts AC, 60 Cycle (Transmitter: 7½ Volt Battery)
RATING	TV (VHF): 150 Watts, 1.35 Amp. @ 117 Volts AC
TUNING RANGE	TV: Channels 2 thru 13 VHF, 14 thru 83 UHF, Video IF 45.75MC, Sound IF 41.25MC (Intercarrier) AM Radio 146: 540 to 1620KC (455KC IF) FM-AM Radio 156: AM - 535 to 1700KC (455KC IF) FM - 87 to 109MC (10.7MC IF)

FOR SERVICE INFORMATION ON RECORD CHANGER - SEE SIMILAR UNIT - PHOTOFACT SET 465 FOLDER 6.
FOR SERVICE INFORMATION ON RADIO CHASSIS 158, 159, 160 - SEE PHOTOFACT SET 552 FOLDER 1.

SEE PAGE 3 FOR SERVICING IN THE FIELD

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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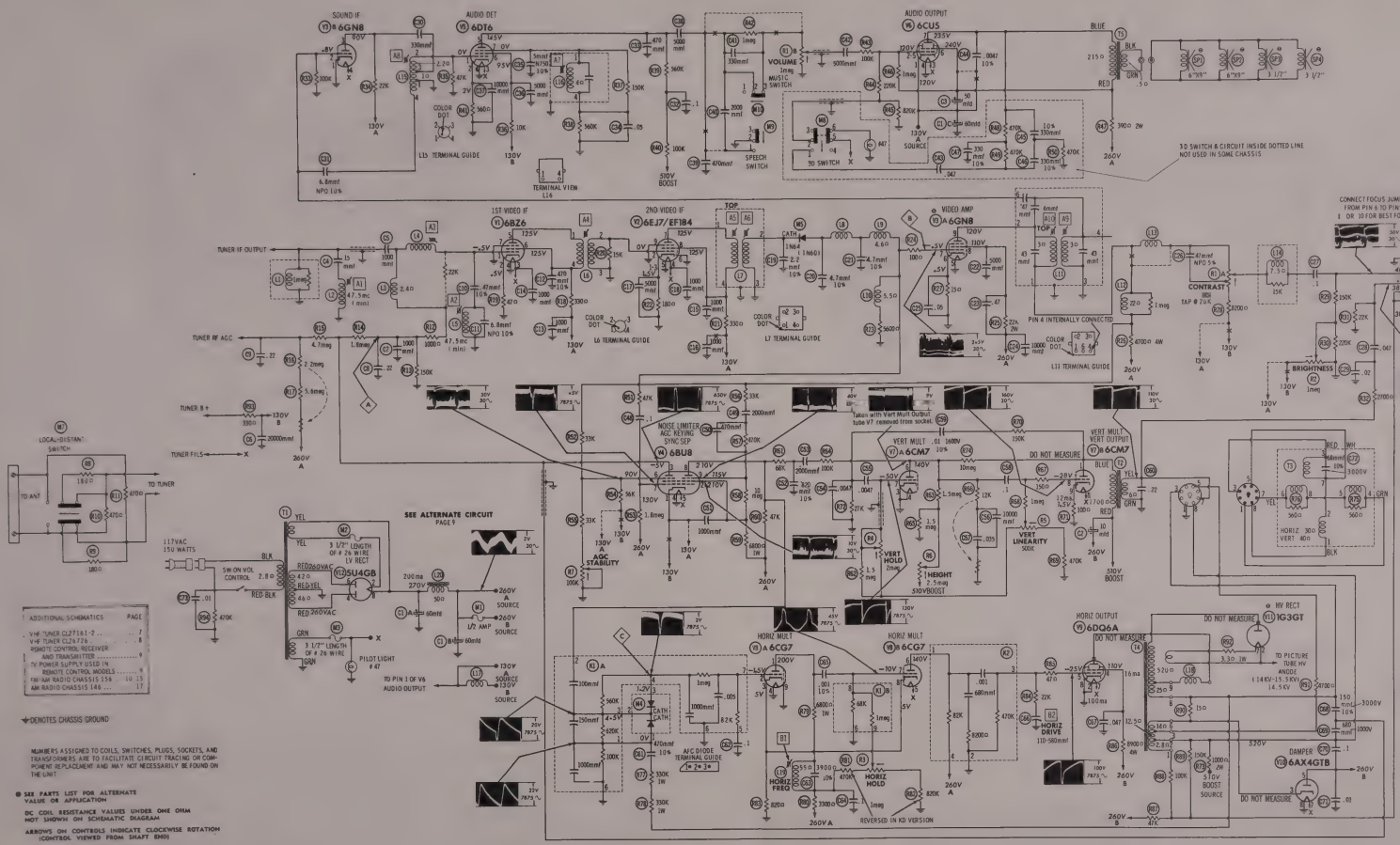
SET 554 FOLDER 2


SOUND IF
6GN8
AUDIO DET
6DT6
AUDIO OUTPUT
6CU5
VOLUME
MUTE SWITCH
SPEECH SWITCH
90 SWITCH
SOURCE
BLUE
BLK
GRN
RED
3D SWITCH & CIRCUIT INSIDE DOTTED LINE NOT USED IN SOME CHASSIS
1ST VIDEO IF
6BZ6
2ND VIDEO IF
6EJ7/EF184
VIDEO AMP
6GN8
TOP
TUNER IF OUTPUT
TUNER RF AGC
TUNER B+
TUNER FILS
CONNECT FOCUS JUMPER FROM PIN 6 TO PINS 1 OR 10 FOR BEST FOCUS
CONTRAST
BRIGHTNESS
PICTURE TUBE
23AHP4
PIN 4 INTERNALLY CONNECTED
LOCAL-DISTANT SWITCH
TO TUNER
TO ANT
117VAC 150 WATTS
SW ON VOL CONTROL
SEE ALTERNATE CIRCUIT PAGE 9
3 1/2" LENGTH OF # 26 WIRE LV RECT
5U4GB
RED 260VAC
RED-YEL
GRN
3 1/2" LENGTH OF # 26 WIRE
PILOT LIGHT # 47
TO PIN 3 OF V6 AUDIO OUTPUT
NOISE LIMITER AGC KEYING SYNC SEP
6BU8
Taken with Vert Mult Output tube V7 removed from socket
VERT MULT
6CM7
VERT MULT OUTPUT
6CM7
DO NOT MEASURE
VERT LINEARITY
VERT HOLD
HEIGHT
AGC STABILITY
HORIZ MULT
6CG7
HORIZ MULT
6CG7
HORIZ OUTPUT
6DQ6A
HV RECT
1G3GT
TO PICTURE TUBE HV ANODE (14KV-15.5KV) 14.5KV
HORIZ DRIVE
HORIZ FREQ
HORIZ HOLD
AFC DIODE TERMINAL GUIDE
REVERSED IN KD VERSION
DAMPER
6AX4GTB
BOOST SOURCE
HV TRANSFORMER TERMINAL BOARD (VIEWED FROM WIRING SIDE OF CHASSIS)
L5 TERMINAL GUIDE
TERMINAL VIEW L6
L7 TERMINAL GUIDE
L11 TERMINAL GUIDE
COLOR DOT
TAP 8 21K
ADDITIONAL SCHEMATICS PAGE
V-H-F TUNER CL27161-2 ... 7
V-H-F TUNER CL26726 ... 8
REMOTE CONTROL RECEIVER AND TRANSMITTER ... 9
TV POWER SUPPLY USED IN REMOTE CONTROL MODELS ... 9
FM-AM RADIO CHASSIS 156 ... 10-15
AM RADIO CHASSIS 148 ... 17
DENOTES CHASSIS GROUND
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM
ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)
WAVEFORMS TAKEN WITH CONTROLS SET TO PRODUCE 30 VOLTS PEAK-TO-PEAK SIGNAL AT PICTURE TUBE.
1 DC voltage measurements taken with vacuum tube voltmeter, AC voltage measured at 1000 ohms per volt
2 Pin numbers are counted in clockwise direction on bottom of socket
3 Measured values are from socket pin to common negative unless otherwise stated
4 Line Voltage maintained at 117 volts for voltage readings
5 All controls set for normal operation; no signal applied
A PHOTOFACT STANDARD NOTATION SCHEMATIC
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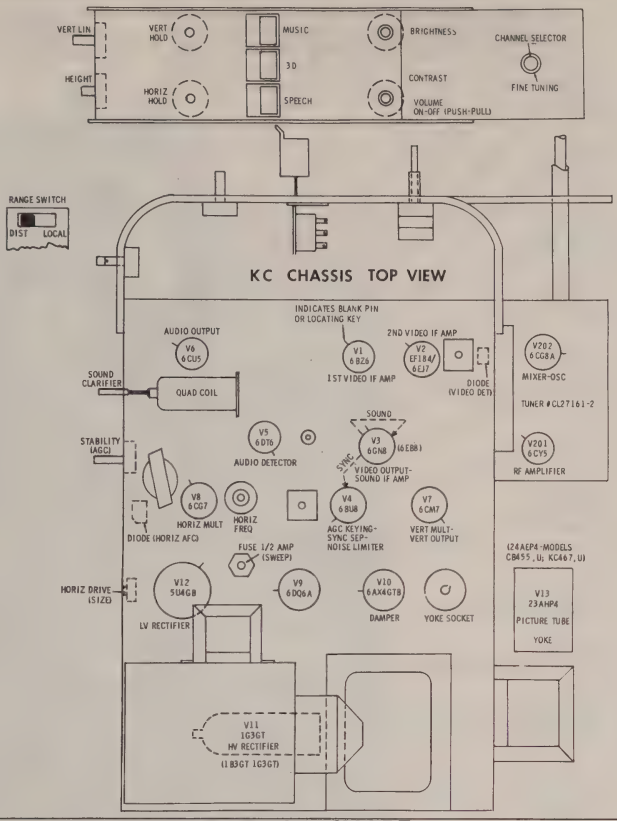
OLYMPIC CHASSIS KB, KBU,
KC, KCU, KD, KDU, KRB, KRD

TV TUBE PLACEMENT CHART

NOTE: TUBE PLACEMENT IN CHASSIS KB, KD, KRB, & KRD SAME AS CHART SHOWN; CONTROL MOUNTING BRACKET WITH COMPONENTS IS RELOCATED IN SOME VERSIONS.



TUBE FAILURE CHECK CHART

The following chart lists tubes whose failures are most likely to produce indicated symptoms. Refer to tube placement chart for location and type of tube.

POWER SUPPLY FAILURE
No raster, no sound Fuse Wire (LV Power), Fuse Wire (Fil.), V12

SWEEP FAILURE
No raster, has sound Fuse (Sweep), V8, V9, V10, V11, V13
No vertical deflection V7
Poor vert. linearity or foldover V7
Poor horiz. linearity or foldover V8, V9, V10
Narrow picture V8, V9, V10, V12
Vert. off freq. V7
Horiz. off freq. Diode (Horiz. AFC), V8

LOSS OF PICTURE OR SOUND
No pic, no sound, has raster V1, V2, Diode (Video Det.), V3, V6
No pic, no sound, has snow V201, V202
No pic, has sound, has raster V3, V13
Has pic, no sound V3, V5, V6
Overloaded picture V4

SYNC FAILURE
No vert. sync V4
No horiz. sync V4
No vert. or horiz. sync V4

SERVICING IN THE FIELD

SAFETY GLASS REMOVAL (MODEL KC366)

Remove 4 screws holding the trim strip at the top edge of the safety glass. Tilt glass out and remove.

FUSE AND FUSE DEVICE

TV: Sweep - ¾ Amp. (M1)
LV Supply - Fuse Wire (M2)
Filament - Fuse Wire (M3)
See "Tube Placement Chart" for TV fuse location.
See Photo, Page 4, for TV fuse wire location.

Radio 146 and 156:
Line Fuse - 1 Amp.

TUNER OSCILLATOR ADJUSTMENTS (MODEL KC366)

To touch up the VHF Oscillator, remove Channel Selector and Fine Tuning knobs. See "VHF Oscillator Alignment" for detailed instructions.

AGC

The AGC may be varied by means of an AGC (Stability) Control. (For location, see "Tube Placement Chart".)

FOCUS

The focus may be varied by the position of a strap on the base of the picture tube.

HORIZONTAL OSCILLATOR FIELD ADJUSTMENTS

Coarse adjustment of the Horizontal Hold is accomplished by the proper setting of the Horizontal Frequency Slug (B1). (For location, see "Tube Placement Chart".)

HORIZONTAL DRIVE AND HORIZONTAL SIZE

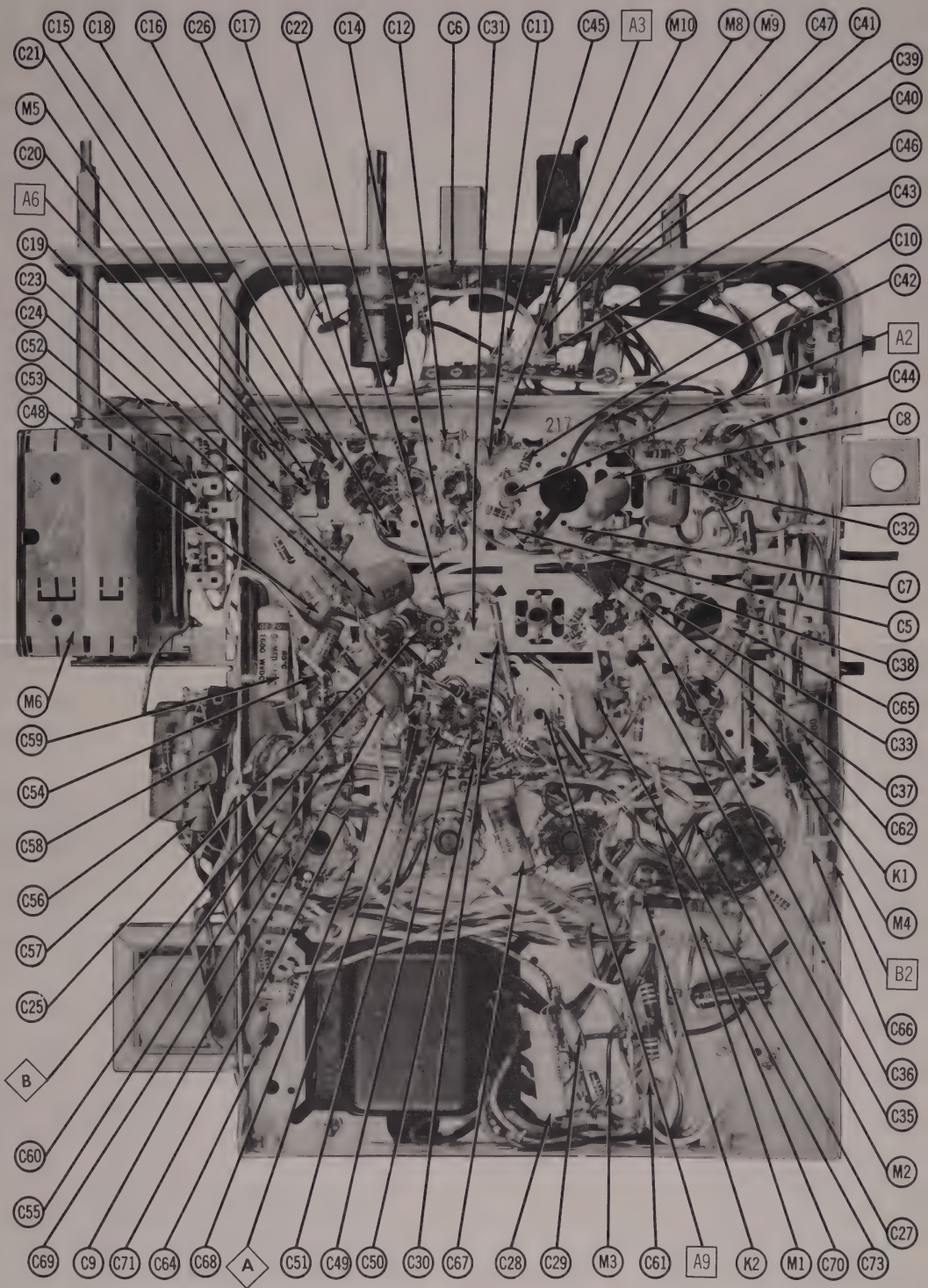
The Horizontal Drive (Size) Trimmer (B2) is used for both size and drive adjustments. See back page for complete "Horizontal Sweep Circuit Adjustments".

BUZZ ADJUSTMENT

To eliminate intercarrier buzz, adjust the Sound Clarifier (Quadrature Coil Slug, A7) for minimum buzz and maximum sound.

CENTERING

Centering is accomplished by 2 magnetic rings, located behind the yoke, on the neck of the picture tube.



TV CHASSIS BOTTOM VIEW - CAPACITOR, ALIGN., MISC. IDENT.
NOTE: IN SOME VERSIONS, MOUNTING BRACKET WITH COMPONENTS IS RELOCATED.

TV CHASSIS BOTTOM VIEW - RESISTOR, INDUCTOR, TRANSFORMER IDENTIFICATION
NOTE: IN SOME VERSIONS, MOUNTING BRACKET WITH COMPONENTS IS RELOCATED.

TV ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

The High Voltage lead should be securely taped and kept away from the chassis.
Allow a 20 minute warm-up period for the receiver and test equipment.
Suggested Alignment Tools: A1 thru A7, A9, A10 ..... GENERAL CEMENT #8282, 8606, 8606L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545
A8 ..... GENERAL CEMENT #8721, 8722
WALSCO #2519

VIDEO IF ALIGNMENT

Connect the synchronized sweep voltage from the sweep generator to the horizontal input of the oscilloscope for horizontal deflection.
The generator output lead should be terminated with its characteristic impedance, usually 50 ohms.
Use only enough generator output to provide a usable indication.
Connect the negative lead of a 3 volt bias supply to point (A). Positive to chassis.

	SWEEP GENERATOR COUPLING	SWEEP GENERATOR FREQUENCY	MARKER GENERATOR FREQUENCY	CHANNEL	CONNECT SCOPE	ADJUST	REMARKS
1.	High side to an ungrounded tube shield over Mixer-Osc. tube. Low side to chassis.	Not Used	47.5MC (Unmod.)	Any non-interfering channel	Use VTVM DC probe to point (B). Common to chassis.	A1, A2	Adjust for MINIMUM deflection.
2.	"	44MC (10MC Swp.)	43.25MC 45.75MC	"	Vert. Amp. thru detector probe to pin 5 (plate) of 1st Video IF Amp. Low side to chassis.	Mixer Plate Coil and A3	Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown.
3.	"	"	44.5MC	"	Vert. Amp. to point (B). Low side to chassis.	A4	Adjust for maximum amplitude.
4.	"	"	43.25MC 45.75MC	"	"	A5, A6	Move both cores out to their respective ends of coil form. Turn A5 in for maximum amplitude. Adjust A6 for response similar to Fig. 2. If necessary, retouch A4 and A5 to obtain desired response.

SOUND IF ALIGNMENT

Turn the set on and tune in a strong TV signal. Adjust A7 for maximum volume. Disconnect the antenna to provide a weak signal. If this does not provide enough signal to be heard, it may be necessary to insert an attenuator in series with the antenna and connect to the receiver. Adjust A8 and A9 for maximum volume. Connect the antenna direct to provide a strong signal and retouch A7 for maximum undistorted sound.

4.5MC TRAP ALIGNMENT

Tune in a strong TV signal and set Contrast at maximum. Adjust the Fine Tuning until a beat pattern is visible. Adjust A10 for MINIMUM beat interference.

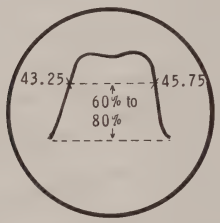


FIG.1

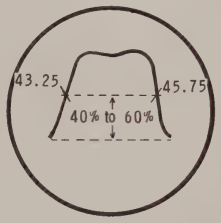
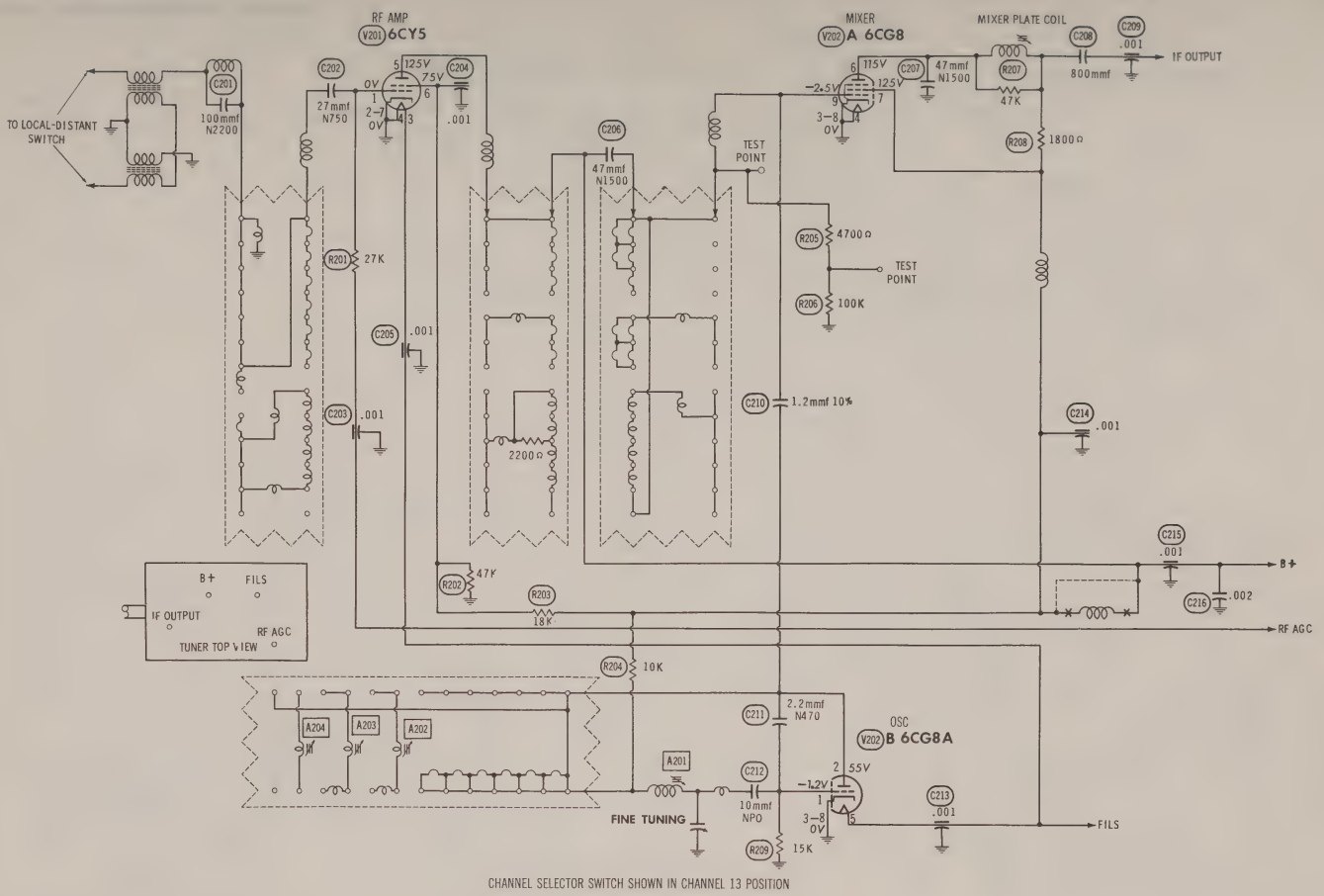


FIG. 2

VHF TUNER ALIGNMENT INSTRUCTIONS

VHF OSCILLATOR ALIGNMENT

Set the Fine Tuning to the center of its range. Set the Channel Selector to the highest high band channel operating in the area.
Adjust A201 for best picture and sound. Check all other high band channels operating in the area in a descending order and if necessary, adjust the coil for that channel by bending toward or away from the wafer for best picture and sound.
Set the Channel Selector to the highest low band channel operating in the area and adjust the appropriate slug for best picture and sound.
A202 is the adjustment for both channel 6 and 5. However the slug can only be reached when the selector is set to channel 6. Therefore, to adjust channel 5 switch to channel 6, adjust slug, then switch back to channel 5 and check picture.
Repeat until adjustment is satisfactory. A203 is for adjusting channels 4 and 3 and is adjusted in the same manner switching to channel 4 to adjust channel 3. A204 is for adjusting channel 2.



CHANNEL SELECTOR SWITCH SHOWN IN CHANNEL 13 POSITION

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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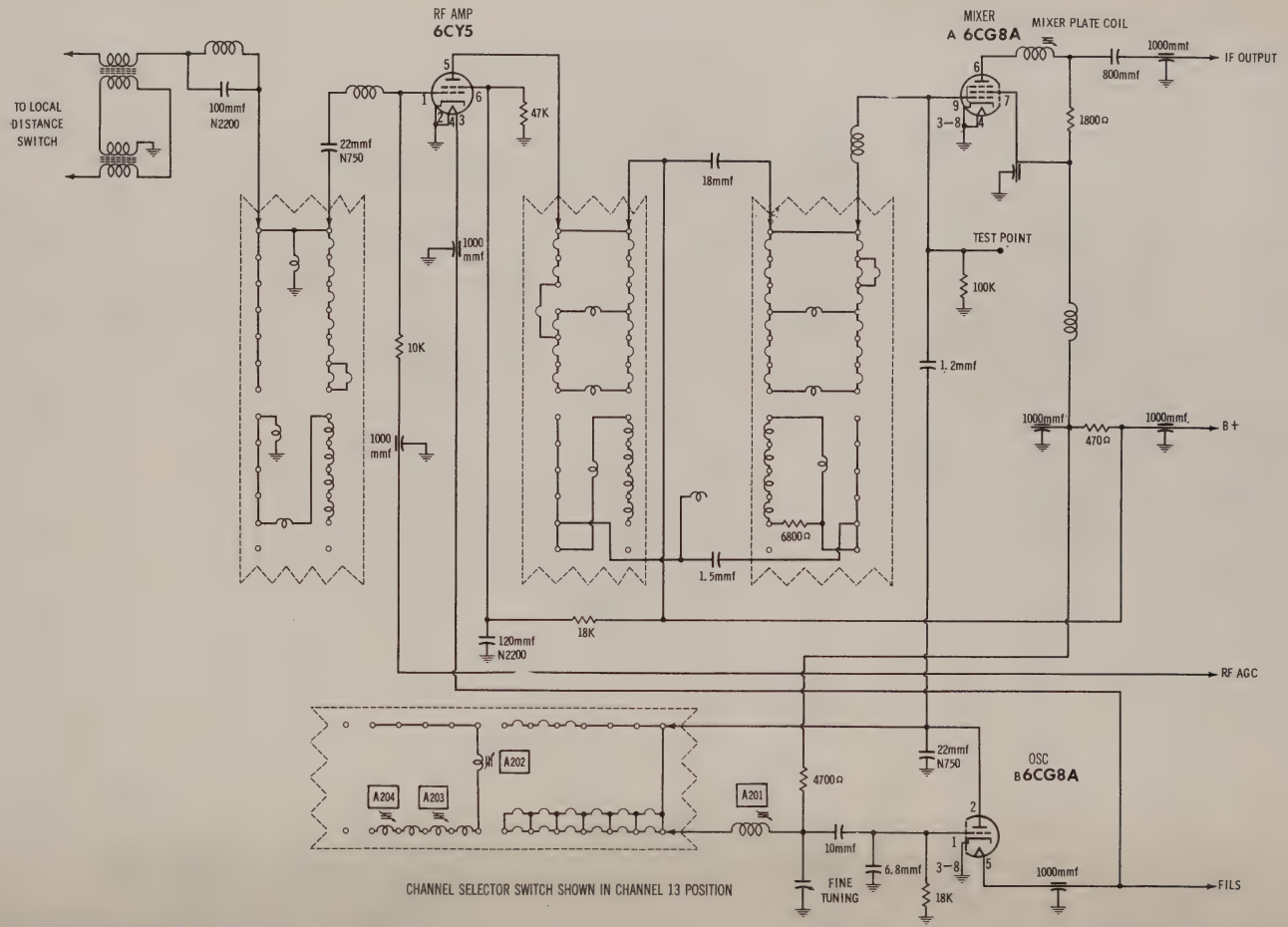
VHF TUNER CL27161-2

OLYMPIC CHASSIS KB, KBU, KC, KCU, KD, KDU, KRB, KRD



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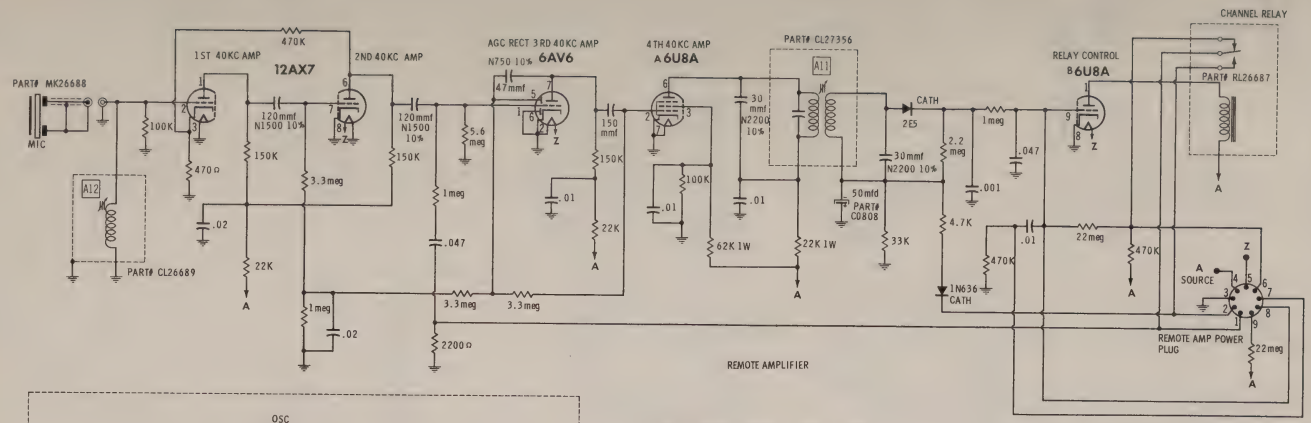
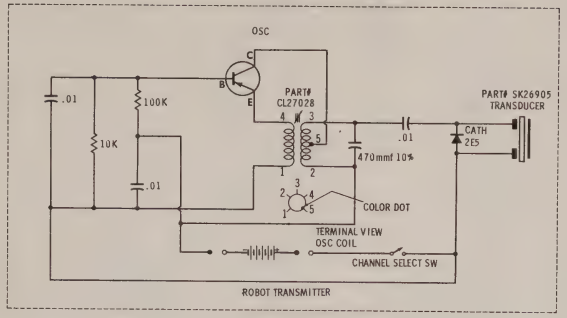
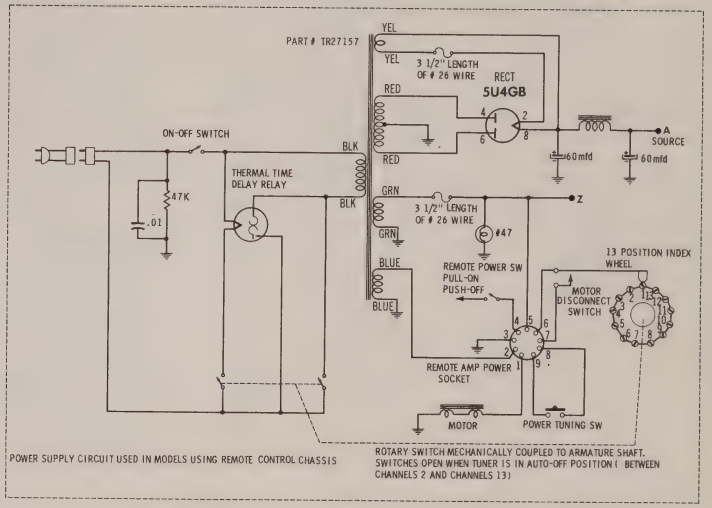
VHF TUNER CL26726






PART # TR27157
ON-OFF SWITCH
THERMAL TIME DELAY RELAY
RECT 5U4GB
SOURCE
13 POSITION INDEX WHEEL
REMOTE POWER SW PULL-ON PUSH-OFF
MOTOR DISCONNECT SWITCH
REMOTE AMP POWER SOCKET
MOTOR
POWER TUNING SW
POWER SUPPLY CIRCUIT USED IN MODELS USING REMOTE CONTROL CHASSIS
ROTARY SWITCH MECHANICALLY COUPLED TO ARMATURE SHAFT. SWITCHES OPEN WHEN TUNER IS IN AUTO-OFF POSITION (BETWEEN CHANNELS 2 AND CHANNELS 13)

ALIGNMENT INSTRUCTIONS

Circuits of the remote control amplifier have been properly aligned at the factory and generally are not affected by tube or component replacement. Lead dress and component placement are important and should not be disturbed when the unit is serviced.
If alignment is necessary, touch up slug (A11) of the discriminator so that the remote control transmitter functions properly. If the microphone is changed, a slight adjustment of A12 may be necessary.

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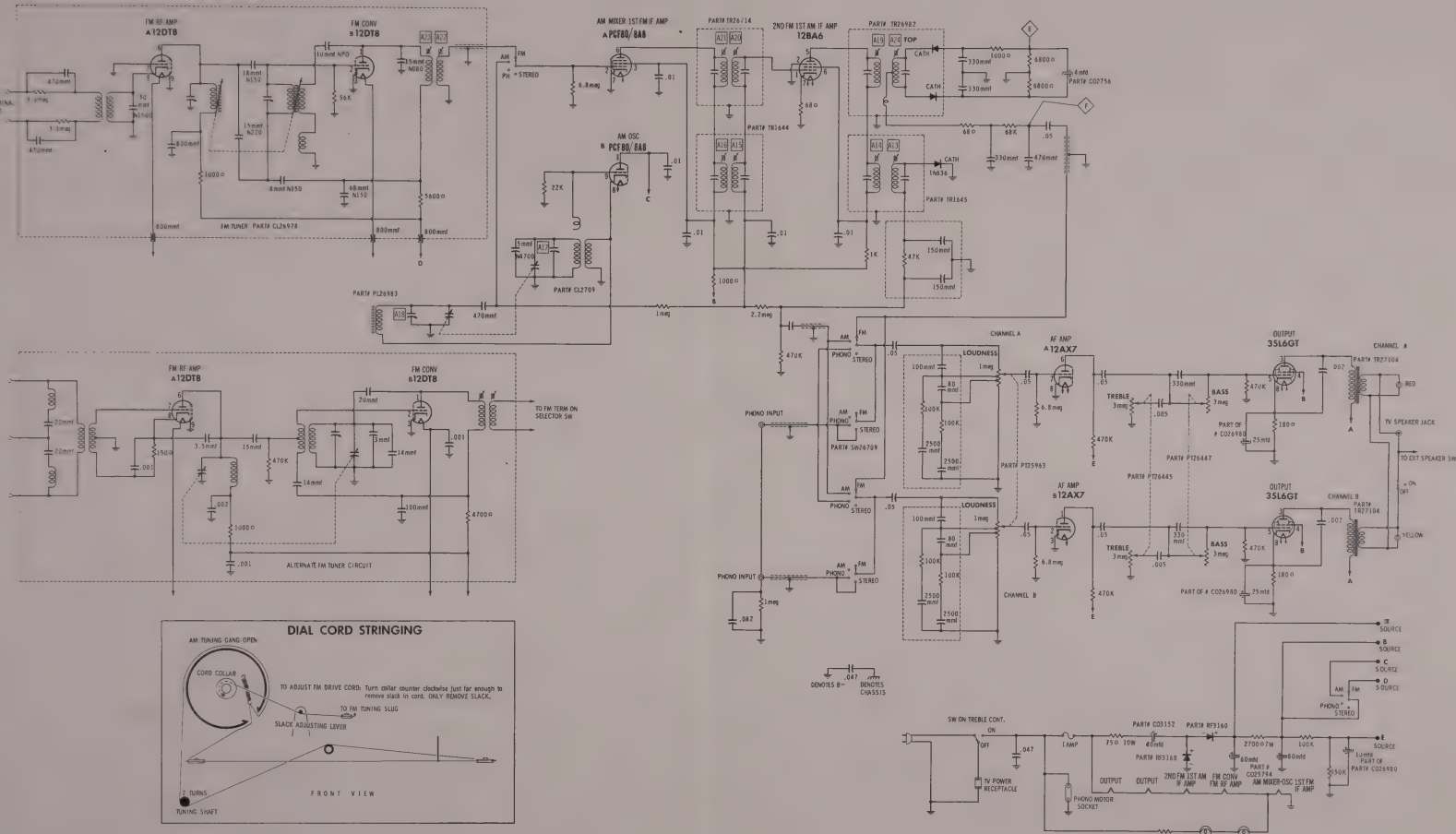
REMOTE CONTROL RECEIVER & TRANSMITTER - TV POWER SUPPLY USED IN REMOTE CONTROL MODELS



DIAL CORD STRINGING

AM TUNING GANG OPEN
CORD COLLAR
TO ADJUST FM DRIVE CORD: Turn collar counter clockwise just far enough to remove slack in cord. ONLY REMOVE SLACK.
TO FM TUNING SLUG
SLACK ADJUSTING LEVER
FRONT VIEW
2 TURNS
TUNING SHAFT

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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FM-AM RADIO CHASSIS 156

ALIGNMENT INSTRUCTIONS
FM–AM RADIO CH.156

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.
Suggested Alignment Tools:
A13 thru A16, A20, A21 ..... GENERAL CEMENT #5097, 8727
WALSCO #2515
A17, A18 ..... GENERAL CEMENT #5004, 5008, 5009
WALSCO #2520
A19, A24 ..... GENERAL CEMENT #8282, 8606, 8606L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545
A22, A23 ..... GENERAL CEMENT #8282, 8606, 8606L, 9091
WALSCO #2526, 2541, 2542, 2543, 2544

AM ALIGNMENT - SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Place 3 turn loop of stiff insulated wire around Loopstick. Connect Signal generator leads across loop	455KC (400∿ Mod.)	(AM) Tuning gang fully open	Across voice coil	A13, A14, A15, A16	Adjust for maximum output.
2.	Loop	1500KC	1500KC	"	A17	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.	"	1400KC	1400KC Signal	"	A18	Adjust for maximum output.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM - SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
4.	Place a piece of insulated wire between the FM Mixer Oscillator tube and shield. Connect high side of signal generator to this wire. Low side to chassis.	10.7MC (Unmod.)	(FM) Point of non-interference.	DC probe to point (F). Common to B-.	A19, A20, A21, A22, A23	Adjust for maximum deflection.
5.	"	"	"	DC probe to point (F). Common to B-.	A24	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE - SELECTOR IN FM POSITION

Use frequency modulated signal with 60∿ modulation and 450KC sweep. Use 120∿ sawtooth voltage in scope for horizontal deflection.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
4.	Place a piece of insulated wire between the FM Mixer Oscillator tube and shield. Connect high side of generator to this wire. Low side to chassis.	10.7MC (450KC Swp)	(FM) Point of non-interference	Vert. Amp. to point (F). Low side to B-.	A19, A20, A21, A22, A23	Disconnect stabilizing capacitor. Adjust for maximum gain and symmetry of response similar to Fig. 3 with markers as shown. Reconnect capacitor.
5.	"	"	"	Vert. Amp. to point (F). Low side to B-.	A24	Adjust to place marker at the center of crossover lines similar to Fig. 4. SLIGHTLY retouch A19 for maximum amplitude and straightness of crossover lines.

FM RF ALIGNMENT - SELECTOR IN FM POSITION

For Models using variable Inductance tuner only.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
6.	Across FM antenna terminals with 150Ω in each lead.	100MC (Unmod.)	(FM) 100MC	DC probe to point (F). Common to B-.	Slack Adjusting Lever	Adjust until signal is received at 100MC on dial.

FIG. 3

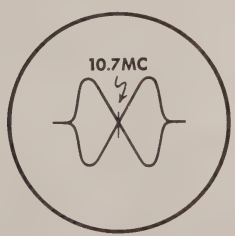


FIG. 4

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	GENERAL ELECTRIC • RAYTHEON • SYLVANIA • TYPE
V1	1st Video IF Amp.	6BZ6
V2	2nd Video IF Amp.	EF184/6EJ7
V3	Video Output - Sound IF Amp.	6GN8 (6EB8) *
V4	AGC Keying - Sync Sep. - Noise Limiter	6BU8
V5	Audio Detector	[illegible]

ITEM No.	USE	TYPE
V6	Audio Output	6CU5
V7	Vert. Mult. - Vert. Output	6CM7
V8	Horiz. Mult.	6CG7
V9	Horiz. Output	6DQ6A
V10	Damper	5AX4GTB
V11	HV Rectifier	1G3GT(1B3GT/1G3GT)*
V12	LV Rectifier	5U4GB

* Used in some versions.

PICTURE TUBE

ITEM No.	REPLACEMENT DATA: OLYMPIC PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	NOTES
V13	23AHP4 * 24AEP4 *		23AHP4 ① 24AEP4 ①	•	23AHP4 ②	① Aluminized ② Silver Screen "85"

* Used in Models CB455, U; KC467, U.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING: CAP	VOLT	REPLACEMENT DATA: OLYMPIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	80	350	CO-25794	PR4-450	BBRT0335		WT458		TVAS-3748 *
B	80	350			BR6035				
C	60	300							
C2	10	450MP	CO-4032-3				TCN511		
C3	50	250	CO-2068-3	PR3585	BR5025	QTI-18	TC59	TD-50-450	TVA-1512

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

ITEM No.	RATING		REMARKS	REPLACEMENT DATA: AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C4	15	NPO 10%		NPO-DI 15	DTZ-15	C10Q15C	CCTO-150	CNO-415	10TCC-Q15
C5	.001			BPD-001	BYA10I2	CCD-102	B-210	5HK-D10	
C6	.02			BPD-02	BD-203	BYB582	CCD-203	B-130	5HK-S20
C7	.001			BPD-001	DD-102	BYA10I2	CCD-102	B-210	5HK-D10
C8	.22	400V		P488N-22		CUB4P22	4DP-5-224	GEM-4022	47M-P22
C9	.22	200V		P288N-22		CUB3P22	2DP-4-224	GEM-2022	27M-P22
C10	.47	10%	[illegible]						
C11	5.6	NPO 10%		NPO-DI 5.6	DTZ-5R6	C10V56C	CCTO-5R6	CNO-568	10TCR-V56
C12	470	10%		DI-480	DD-471	5RS7X7	CCD-471	GP347	10TS-T47
C13	.001			BPD-001	DD-102	BYA10I2	CCD-102	B-210	5HK-D10
C14	.001			BPD-001	DD-102	BYA10I2	CCD-102	B-210	5HK-D10
C15	.001			BPD-001	DD-102	BYA10I2	CCD-102	B-210	5HK-D10
C16	.001			BPD-001	DD-102	BYA10I2	CCD-102	B-210	5HK-D10
C17	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C18	.001			BPD-001	DD-102	BYA10I2	CCD-102	B-210	5HK-D10
C19	2.2	10%		NPO-SI 2.2	TCZ-2R2	C10V22C	CCTO-2R2	CNO-522	10TCC-V22
C20	4.7	10%		NPO-SI 4.7	TCZ-4R7	C10V47C	CCTO-4R7	CNO-547	10TCC-V47
C21	4.7	10%		NPO-SI 4.7	TCZ-4R7	C10V47C	CCTO-4R7	CNO-547	10TCC-V47
C22	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C23	.47	200V		P288N-47		CUB2P47	2DP-5-474	GEM-2047	27M-P47
C24	.01			BPD-01	DD-103	BYA10I3	CCD-103	B-110	5HK-S10
C25	.05	50V		P288N-05	DD-503	CUB2S5	1DP-2-503	GEM-415	27M-S50
C26	47	NPO 5%		DTZ-47	C10Q47C		CNO-447		10TCC-Q47
C27	.1	400V		DP-104	CUB4P1	4DP-3-104	GEM-401		47M-P10
C28	.047	400V		P488N-047	DD-503	CUB4S47	4DP-2-503	GEM-4147	47M-S47
C29	.02	400V		P488N-03	DD-203	CUB4S2	4DP-2-203	GEM-412	47M-S20
C30	330			DI-330	DD-331	L10T33	CCD-331	GP333	10TS-330
C31	8.8	NPO 10%		NPO-DI 6.8	DTZ-6R8	C10V68C	CCTO-6R8	CNO-568	10TCC-V68
C32	.1	600V		P688N-1	DF-104	CUB6P1	6DP-4-104	GEM-601	67M-P10
C33	470			DI-471	BYA10Y47	CCD-471	B-347		10TS-T47
C34	.05	50V		P288N-05	DD-503	CUB2S5	1DP-2-503	GEM-415	27M-S50
C35	5	N750 10%			DTN-5	C10V5U	CCTN-050	CNO-550	10TCU-V50
C36	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C37	.01			BPD-01	DD-103	BYA10I3	CCD-103	B-110	5HK-S10
C38	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C39	470			DI-470	BYA10Y47	CCD-471	B-347		10TS-T47
C40	.002			BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C41	330			DI-330	DD-331	L10T33	CCD-331	B-333	10TS-T33
C42	.005			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C43	.047	200V		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	27M-S47
C44	.0047	600V 10%		P68D47-10%		CUB6D47	6DP-1-472	GEM-6125	67M-D47
C45	330	10%		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33
C46	330	10%		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33
C47	330	10%		DI-330	DD-331	L10T33	CCD-331	GP333	10TS-T33
C48	.1	400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	47M-P10
C49	.002			BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C50	470			DI-470	DD-471	BYA10Y47	CCD-471	B-347	10TS-T47
C51	.001			BPD-001	DD-102	BYA10I2	CCD-102	B-210	5HK-D10
C52	820	10%		DI-820	DD-821	5RS7S2	CCD-831	GP382	10TS-T82
C53	.002			BPD-002	DD-202	BYA10D2	CCD-203	B-220	5HK-D20
C54	.0047	500V		P688N-0047	DE-472	CUB5D47	5DP-1-472	GEM-6247	57M-D47
C55	.0047	600V		P688N-0047	DF-472	CUB6D47	6DP-1-472	GEM-6247	67M-D47
C56	.01			BPD-01	DD-103	BYA10I3	CCD-103	B-110	5HK-S10
C57	.033	600V		P688N-033		CUB6S33	6DP-3-333	GEM-6133	6PS-S35
C58	.1	400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	47M-P10
C59	.01	1600V 10%	#CO26190				16DP-3-103	GEM-1611	
C60	.22	400V		P488N-22		CUB4P22	4DP-5-224	GEM-40	47M-P22
C61	470	10%		DI-470	BR5T47	CCD-471	CCD-471	GP347	10TS-T47
C62	.1	200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	27M-P10
C63	.0039	10%		1464-0039		HR5D39	CM-20B-392K	MCJ462.5	M2-239
C64	.1	400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	47M-P10
C65	.001	600V 10%		V84C8DI-10%		P68D1	6DP-1-102	GEM-1621	67M-D10
C66	110-580		#CT3526				467		
C67	.047	400V		P488N-047	DD-503	CUB4S47	4DP-3-473	GEM-4147	47M-S47
C68	150	3000V 10%	[illegible]						
C69	680	1000V 10%		DI-680	DD-681	5RS7S8	CCD-681	GP368	10TS-T68
C70	.1	400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	47M-P10

FIXED CAPACITORS (cont)

ITEM No.	RATING		REMARKS	REPLACEMENT DATA: AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C71	.01	3000V 10%	#CO4520	BPD-01	DD-103	BYA10I3	CCD-103	B-110	5HK-S10
C72	.68	600V						2DY-468	
C73	.01	600V		P688N-01	D6-103	CUB6S1	6DP-2-103	6TM-S10	6TM-S10

\# Olympic Part Number

CONTROLS

ITEM No.	RATING: RESISTANCE	WATTS	REPLACEMENT DATA: OLYMPIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	30K	½	PT31051					Contrast
20K Tap								
B	1meg	½						Volume
C	Switch							Push-Pull Off-On
R2A	1meg	½	PT5702	B-69	A47-1meg-S	QII-137	U54	Brightness
B	Shaft			Not Req.	KSB-3	Not Req.	Not Req.	
R3A	1meg	½	PT25439	B-69	A47-1meg-S	QII-137	U54	Horiz. Hold
B	Shaft			Not Req.	KSB-3	Not Req.	Not Req.	
R4A	2meg	½	PT25438	B-75	A47-2meg-S	QII-139	U56	Vert. Hold
B	Shaft			Not Req.	KSB-3	Not Req.	Not Req.	
R5A	500K	½	PT25790	T7-69	B47-500K-S	BII-133	PTA55L	Vert. Linearity
B	Shaft			Not Req.	Not Req.	TM4	Not Req.	
R6	2.5meg	½	PT5008-1	T7-83	B47-2.5meg-S	HLC-2	TA255L	Height
R7A	100K	½	PT27319	T7-40	B47-100K-S	BII-128	PTA15L	AGC (Stability)
B	Shaft			Not Req.	Not Req.	TM4	Not Req.	

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN TV PART No.	REMARKS
R8	180Ω			
R9	180Ω			
R10	470Ω			
R11	470Ω			
R12	1000Ω			
R13	150K			
R14	1.5meg			
R15	4.7meg			
R16	22meg			
R17	5.6meg			
R18	1200Ω			
R19	47Ω			
R20	15K			
R21	330Ω			
R22	180Ω			
R23	5600Ω			
R24	100Ω			
R25	22K 2W			
R26	4700Ω 4W	PW5-4700	5W-SQ-4700	
R27	15Ω			
R28	8200Ω			
R29	150K			
R30	220K			
R31	22K			
R32	2700Ω			
R33	100K			
R34	22K			
R35	47K			
R36	10K			
R37	150K			
R38	560K			
R39	560K			
R40	100K			
R41	560Ω			
R42	1meg			
R43	100K			
R44	220K			
R45	820K			
R46	1meg			
R47	390Ω 2W			
R48	470K			
R49	470K			
R50	470K			
R51	47K			

ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	WORKMAN TV PART No.	REMARKS
R52	33K			
R53	1.8meg			
R54	56K			
R55	33K			
R56	33K			
R57	470K			
R58	10meg			
R59	6800Ω 1W			
R60	47K			
R61	68K			
R62	1.5meg			
R63	1.5meg			
R64	100K			
R65	1.5meg			
R66	12K			
R67	150Ω			
R68	1meg			
R69	470K			
R70	150K			
R71	100Ω			
R72	27K			
R73	1000Ω 2W			
R74	10meg			
R75	560Ω			
R76	560Ω			
R77	330K 1W			
R78	330K 1W			
R79	6800Ω 1W			
R80	3300Ω			
R81	470K			
R82	820K			
R83	820Ω			
R84	22K			
R85	47Ω			
R86	8900Ω 4W	PW5-8900	TW-SQ-8900	
R87	47K 1W			
R88	100K			
R89	150K			
R90	150			
R91	4700Ω			
R92	3.3Ω 1W			
R93	330Ω			
R94	470K			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA: OLYMPIC PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	NOTES
L1	RF Choke	CL25476 ①			RTC-8556	T218	① Wound on 1meg Resistor.
L2	47.5MC Trap	CL25545	TV-153	6225	RTC-8556	T218	② Wound on 15K Resistor.
L3	Peaking (36uh)	CL1535	TV-180	6176	RTC-8593	T301	† Parallel with 1meg Resistor.
L4	1st Video IF	CL26946	TV-131	6226	RTC-8626	T218	▲ Parallel with 15K Resistor.
L5	47.5MC Trap	CL4753	TV-153	6225	RTC-8556	T218	
L6	2nd Video IF	CL4791	TV-130	6219	RTC-8551	T217	
L7	3rd Video IF	CL26953					
L8	RF Choke (1.7uh)	CK4225	BC-562	4604	RTC-8516	T856	
L9	Peaking (110uh)	CL3643	TV-194	6112	RTC-8574	T305	
L10	Peaking (160uh)	CL26425	TV-196	6120	RTC-8575	T308	
L11A	4.5MC Trap	TR3386-1					
B	1st Sound IF						
L12	Peaking (750uh)	CL25491 ①	TV-206 †	6148 †	RTC-8583 †	T327 †	
L13	RF Choke (6.8uh)	CK4415	BC-565	4610	RTC-8520	T859	
L14	Peaking (250uh)	CL3398 ②	TV-185 ▲	6181 ▲	RTC-8598 ▲	T315 ▲	
L15	2nd Sound IF	CL4021					
L16	Quadrature	CL31052	TV-124	1481	RTC-8606	T248	
L17	RF Choke (6.8uh)	CL4415	BC-565	4610	RTC-8520	T859	
L18	RF Choke (6.8uh)	CK4415	BC-565	4610	RTC-8520	T859	

COILS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA: OLYMPIC PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	Workman TV PART No.	NOTES
L19	Horiz. Stabilizer	CL5464-1	TV-163	6210	RTC-8622	HS-5	WLC-25	T103	

FILTER CHOKE

ITEM No.	RATINGS: CURRENT (Measured)	DC RES.	INDUCTANCE @ CURRENT 1000 ~(~)	REPLACEMENT DATA: OLYMPIC PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
L20	.200A	50Ω	.7 Hy.	CK4047		C-2343 ①		C-36X	① Drill new mounting hole(s).

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	SEC. 1	SEC. 2	REPLACEMENT DATA: OLYMPIC PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	117V ② 1.35A	520VCT ② 200A ③ DC	5V ③ 3A	TR-4007-2R3 ①	P-2869	P-8172	26R44		① Pt. #TR27157 used in KRB and KRD Chassis.
	SEC. 3	SEC. 4	SEC. 5						
	6.3V ④ 7.6A								

TRANSFORMERS (SWEEP CIRCUITS)

ITEM No.	USE	REPLACEMENT DATA: OLYMPIC PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	Vert. Output	TR-25791-2				A-141X	
T3	Yoke Horiz. 18.4MH (92°) Vert. 40MH	CL-3600-7	MDF-92 ①	DY-18A ①	Y-16 ①	Y-41-3	
	Rear Cover and Centering Device					YC-112	
T4	Horiz. Output	TR-3599-5	HVO-131 * ② ③	HO-315 *	FLY-143 * ②	D-120 *	

① Use original rear cover and centering device, yoke damping network if necessary.
② Drill new mounting hole(s). ③ Filament requires two turns.

*HORIZONTAL OUTPUT TRANSFORMER CONNECTION DATA

ORIGINAL TERMINAL CONNECTIONS	Merit Replacement Connections	Stancor Replacement Connections	Thordarson Replacement Connections	Triad Replacement Connections
9	8	9	4	9
8	6	8	8	8
6	6	6	7	6
5	5	3	2	3
2	4	2	5	2
1	3	1	1	1

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE: PRI.	SEC.	REPLACEMENT DATA: OLYMPIC PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T5	2200Ω	1Ω	TR28051					

SPEAKER

ITEM No.	TYPE: SIZE	FIELD	V. C. IMP.	REPLACEMENT DATA: OLYMPIC PART No.	QUAM PART No.	NOTES
SP1	6" x 9"	PM	3-4Ω	SK5738-1	69A3	
SP2	6" x 9"	PM	3-4Ω	SK5738-1	69A3	① May be used in some models.
SP3	3½"	PM	3-4Ω	SK26301	3A15T24	
SP4	3½"	PM	3-4Ω	SK26301	3A15T24	
	4"	PM	14-16Ω	SK26302 ①	4A07R215.7	
	6"	PM	3-4Ω	SK27053 ①	6A21	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	OLYMPIC PART No.	REPLACEMENT DATA	
K1	Horiz. AFC & Mult. Grid	100mmf, 150mmf, .001mfd, .001mfd, .005mfd, 68K, 82K, 100K, 560K, 620K, 1meg, 1meg	PC25716	Aerovox	PA-724
				Centralab	PC-367
K2	Horiz. Output Grid	680mmf, .001mmf, 820Ω, 82K, 470K	PC25714	Aerovox	PA-723
				Centralab	PC-366

OLYMPIC CHASSIS KB, KBU, KC, KCU, KD, KDU, KRB, KRD

FOLDER 2

PARTS LIST AND DESCRIPTIONS (Continued)

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			OLYMPIC PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	C	¼A 250V	FU26203		332.500 (C ¼A 250V)	346002	C ¼	HC 3/10 - ¼
M2	3½"	length	#26 wire					
M3	3½"	length	#26 wire					

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		OLYMPIC PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M4	1N64	RF5465 *	6GC1 *		* Dual Selenium, Common Cathode Type
M5		1N64 † or 1N60 ǂ		1N64 † or 1N60 ǂ	† Video Detector ǂ Alternate Video Detector

MISCELLANEOUS

ITEM No.	PART NAME	OLYMPIC PART No.	NOTES
M6	Tuner	CL27161-2	VHF Tuner (KC Chassis), STANDARD COIL REPLACEMENT #GG4220A
		CL26726	VHF (KD & KB Chassis)
		CL26405	VHF-UHF (Chassis KDU & KBU)
		CL27183	VHF-UHF (Chassis KCU)
M7	Switch	SW2966-1	Local-Distant (DPDT Slide Type)
M8	Switch		3D (DPDT Slide Type)
M9	Switch		Speech (SPDT Slide Type)
M10	Switch		Music (SPDT Slide Type)

PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA								NOTES
	OLYMPIC PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.		
	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	
M11			76TS	N8-7 * N8-3 *	26S	2604 * 2605 *	8TA4-S	N-8TA-S *	

WIRING DATA

High Voltage Lead	Use BELDEN No. 8869
Shielded Hook-up Wire	Use BELDEN No. 8885 (Single Conductor) 8738 (Two Conductor)
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type)	Use BELDEN No. 8874
300Ω Tuner Input Lead	Use BELDEN No. 8225
300Ω Antenna Lead-in	Use BELDEN No. 8230 or 8275
Antenna Rotor Cable	Use BELDEN No. 8484 (Flat) or 8484 (Round) - 4 Conductor 8485 (Round) - 5 Conductor 8488 (Round) - 8 Conductor

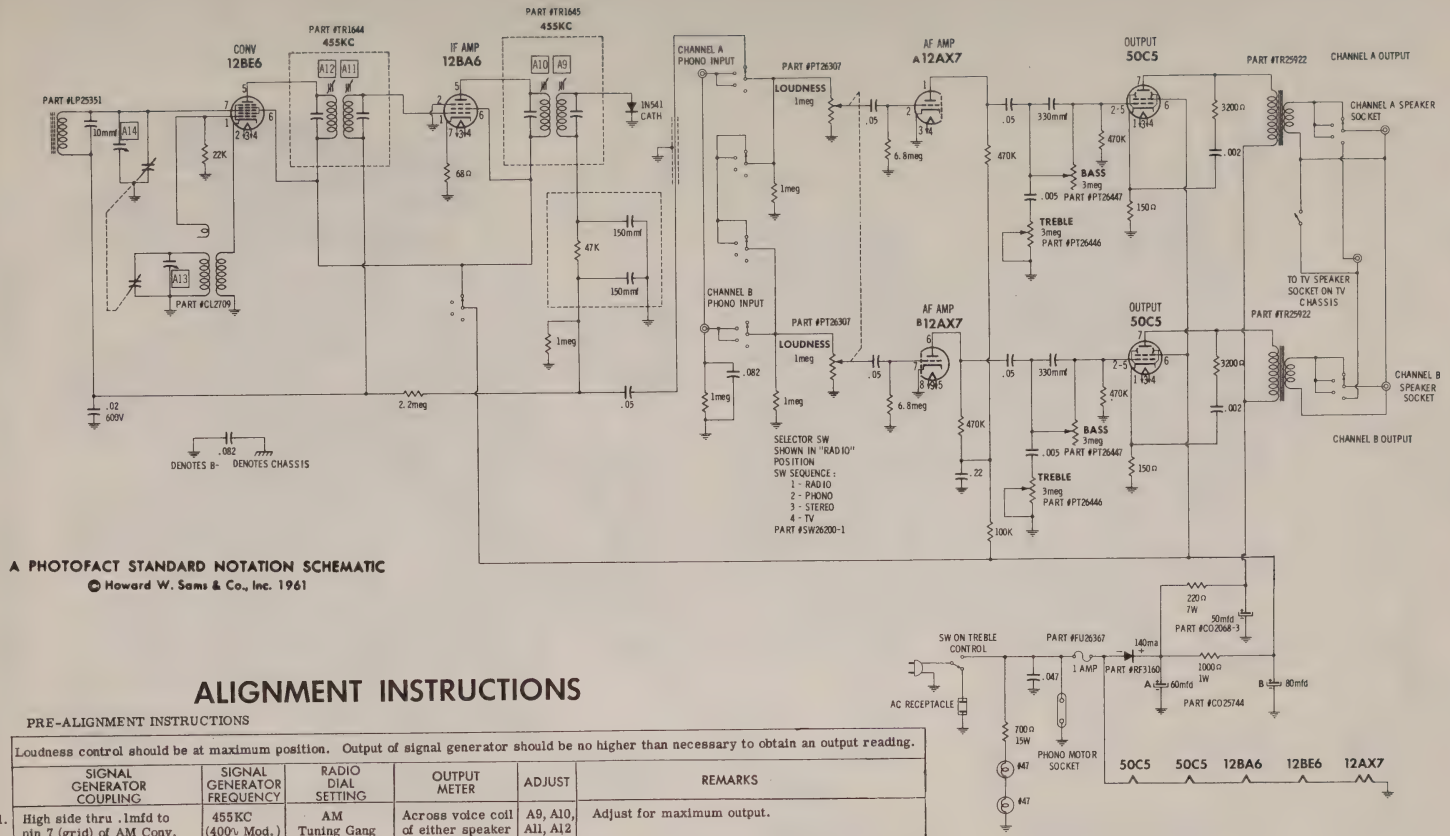
CABINET PART LIST - PAGE 16

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

DESCRIPTION	PART NO.	MODEL NO.	TB331, U	CB336, U	CB337, U	CB338, U	CB455, U	TRB334	CRB339	CD342, U	CD344, U	CD345, U	CD346, U	CD347, U	KB362, U	KC366, U	KC368, U	KC369, U	KC370, U	KC373, U	KC467, U	KD363, U	KD365, U	KD375, U	KRD380	KRD381	KBS362, U
Safety Glass	PP27214		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Safety Glass	PP3939-1						X														X						
Mask	PP3938						X														X						
Mask	PP27212		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Radio Dial Glass-Simulcast (159, 160 Ch.)	DL28031																					X	X	X	X	X	
" " " "	DL28032															X	X	X	X	X	X						
Radio Dial Glass-AM Band (158 Chassis)	DL28035																					X	X	X	X	X	
" " " "	DL28036															X	X	X	X	X	X						
Knob-VHF Channel Selector	KN28042		X	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X
Knob- "	KN28064															X	X	X	X	X	X						
Knob-VHF Chan. Indicator	KN28061		X	X	X	X	X			X	X	X	X	X	X							X	X	X			X
Knob-UHF Channel Selector	KN28046		X	X	X	X	X			X	X	X	X	X	X							X	X	X			X
Knob- "	KN28072															X	X	X	X	X	X						
Knob-UHF Chan. Indicator	KN28073															X	X	X	X	X	X						
Knob- "	KN26269														X							X	X	X			X
Button-Power Tuning	KN27278																								X	X	
Knob-Fine Tuning (VHF)	KN28062		X	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X
Knob- " "	KN28065															X	X	X	X	X	X						
Knob-Fine Tuning (UHF)	KN27270														X							X	X	X			X
Knob- " "	KN5986															X	X	X	X	X	X						
Knob-Radio Tuning	KN26491														X												X
Knob- "	KN28023															X	X	X	X	X	X	X	X	X	X	X	
Knob-Radio Control	KN28022															X	X	X	X	X	X	X	X	X	X	X	
Knob-Radio, Pull, Level	KN28024																					X	X	X	X	X	
Knob-Radio, Pull, Vertical	KN28025															X	X	X	X	X	X						
Knob- (AM, Phono, Stereo, TV (160 Chassis)	KN26493														X												X
Knob- (TV, FM, AM, Phono, Stereo (158 Chassis)	KN26495														X												X
Knob- " " (Radio Bandswitch (160 Chassis)	KN27310															X	X	X	X	X	X						
Knob- " " (159 Chassis)	KN27311															X	X	X	X	X	X						
Knob- " " (158 Chassis)	KN27312															X	X	X	X	X	X						
Knob- " " (160 Chassis)	KN28026																					X	X	X	X	X	
Knob- " " (159 Chassis)	KN28027																					X	X	X	X	X	
Knob- " " (158 Chassis)	KN28028																					X	X	X	X	X	
Knob-Channel A (TV-In Radio-Out)	KN27276														X												X
Knob-Automatic Off	KN27507							X	X																X	X	
Button- (Manual-In Remote-Out)	KN27279																								X	X	
Button- "	KN27318							X	X																		
Button-Remote	KN27317							X	X																		
Knob-Loudness, Rear	KN26318														X												X
Knob-Loudness, Front	KN26487														X												X
Knob-Channel A, Brass, Front	KN26485														X												X
Knob-Channel A, Off, Treble	KN26486														X												X
Knob-Treble, Rear	KN26489														X												X
Knob-Bass, Rear	KN26490														X												X
Knob-Pull	KN27314		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knob-Music, Speech, 3D	KN28066									X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	
Button-Music	KN28066-1																								X	X	
Button-3D	KN28066-3																								X	X	
Button-Speech	KN28066-2																								X	X	
Knob-Vertical Hold	KN28067															X	X	X	X	X	X						
Knob-Horizontal Hold	KN28068															X	X	X	X	X	X						
Knob-Horizontal, Vertical	KN28045		X	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X
Knob-Contrast	KN28059		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Knob-Brightness	KN28060		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

CABINET PART NO.	MODEL NO.
CA28117	TB331, U; TRB334
CA28118	CB336, U; CRB339
CA38119	CB337, U
CA28120	CB338, U
CA28131	CD342, U
CA28132	CD344, U
CA28133	CD347, U
CA28135	CD345, U
CA28137	CD346, U
CA28138	CB455, U
CA28121	KB362, U; KBS362, U
CA28122	KD365, U; KRD381
CA28123	KC366, U
CA28124	KC368, U
CA28125	KC369, U
CA28126	KC370, U
CA28127	KC467, U
CA28134	KD363, U; KRD380
CA28136	KD375, U
CA28140	KC373, U



A PHOTOFACT STANDARD NOTATION SCHEMATIC

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ALIGNMENT INSTRUCTIONS

PRE-ALIGNMENT INSTRUCTIONS

Loudness control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .1mfd to pin 7 (grid) of AM Conv. Low side to chassis.	455KC (400∿ Mod.)	AM Tuning Gang	Across voice coil of either speaker	A9, A10, A11, A12	Adjust for maximum output.
2.	Loop	1500KC	1500KC	"	A13	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.	"	"	"	"	A14	Adjust for maximum output while rocking tuning gang.

AM RADIO CHASSIS 146

OLYMPIC CHASSIS KB, KBU, KC, KCU, KD, KDU, KRB, KRD

VHF TUNER PARTS LIST AND DESCRIPTIONS

CL27161–2

TUBES

• GENERAL ELECTRIC •			• RAYTHEON • SYLVANIA •		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V201	RF Amp.	6CY5	V202	Mixer - Osc.	6CG8A

FIXED CAPACITORS

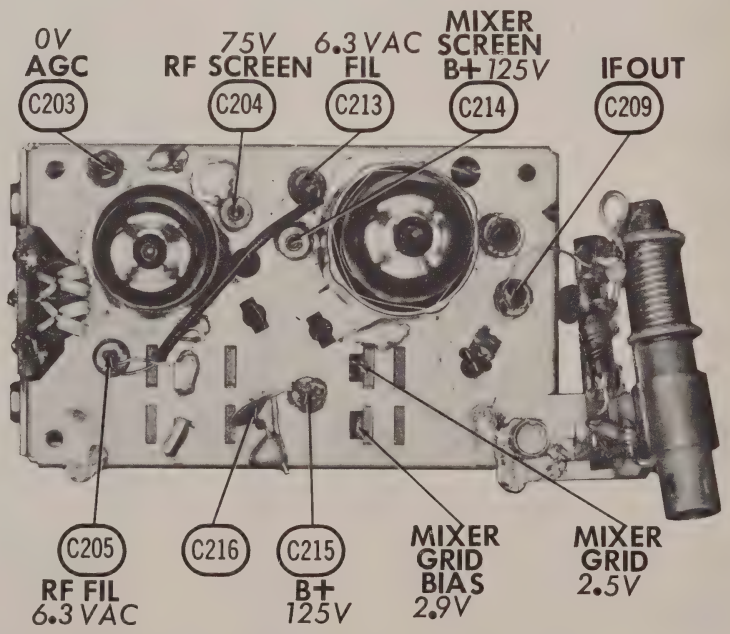
ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C201	100 N2200					*		
C202	27 N750		N750-DI 25	TCN-27	C10Q27U	CCTN-270	CN7-427	10TCU-Q27
C203	.001		EF-001	MFT-1000		CCF-102	CT280A	
C204	.001		EF-001	MFT-1000		CCF-102	CT280A	
C205	.001		EF-001	MFT-1000		CCF-102	CT280A	
C206	47 N1500					*		
C207	47 N1500					*		
C208	800		BPD-0008	DD-801	L10T8	CCD-801	B-382	10TS-T80
C209	.001		EF-001	MFT-1000		CCF-102	CT280A	
C210	1.2 10%		NPO-SI 1.0	TCZ-1				10TCC-V12
C211	2.2 N470					*		
C212	10 NPO		NPO-DI 10	DTZ-10	C10QIC	CCTO-100	CNO-410	10TCC-Q10
C213	.001		EF-001	MFT-1000		CCF-102	CT280A	
C214	.001		EF-001	MFT-1000		CCF-102	CT280A	
C215	.001		EF-001	MFT-1000		CCF-102	CT280A	
C216	.002		BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

RESISTORS

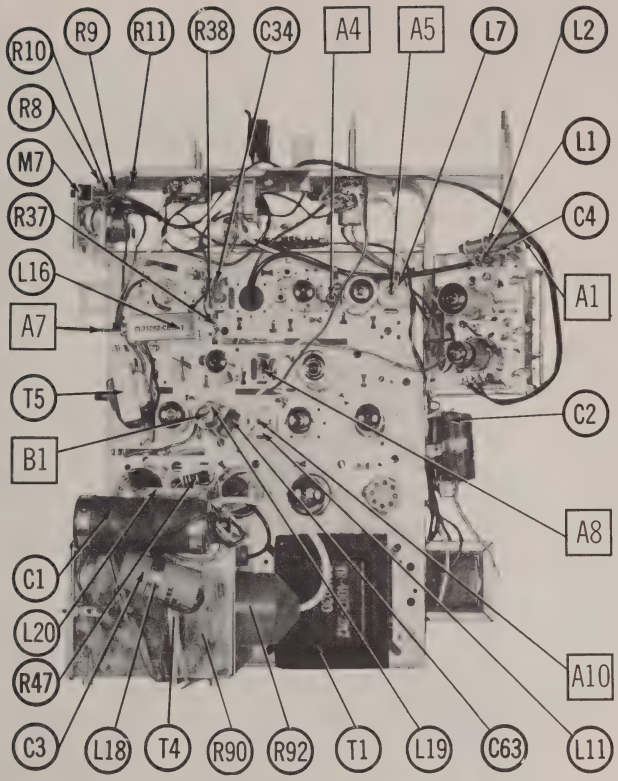
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R201	27K				R206	100K			
R202	47K				R207	47K			
R203	18K				R208	1800Ω			
R204	10K				R209	15K			
R205	4700Ω								

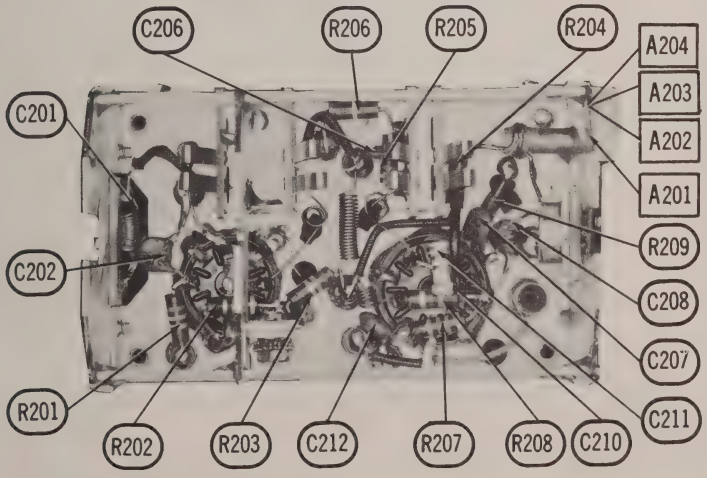


VHF TUNER CL27161–2– TOP VIEW

NOTE: IN SOME VERSIONS, MOUNTING BRACKET WITH COMPONENTS IS RELOCATED.



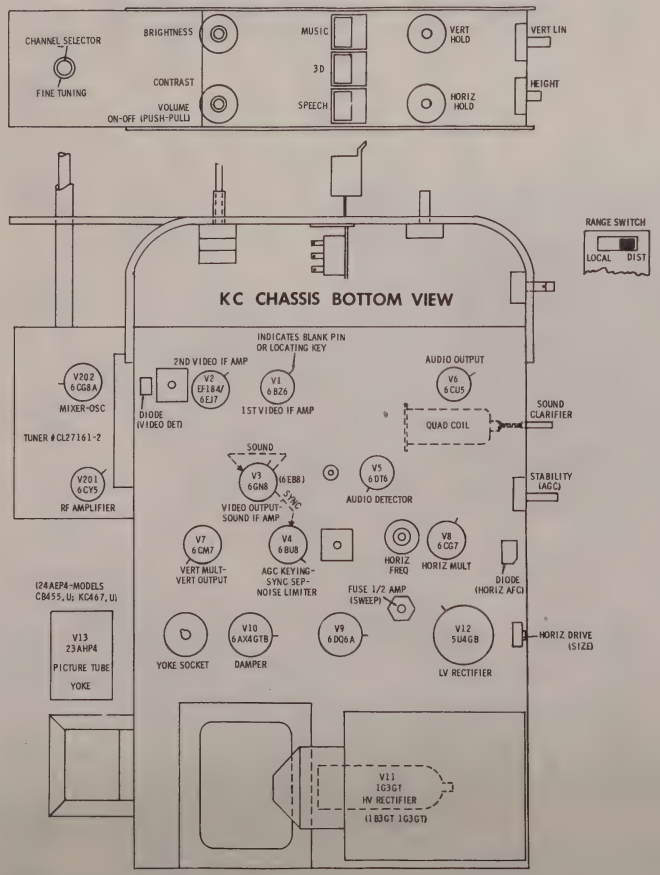
TV CHASSIS - TOP VIEW



VHF TUNER CL27161-2 - BOTTOM VIEW

TV TUBE PLACEMENT CHART

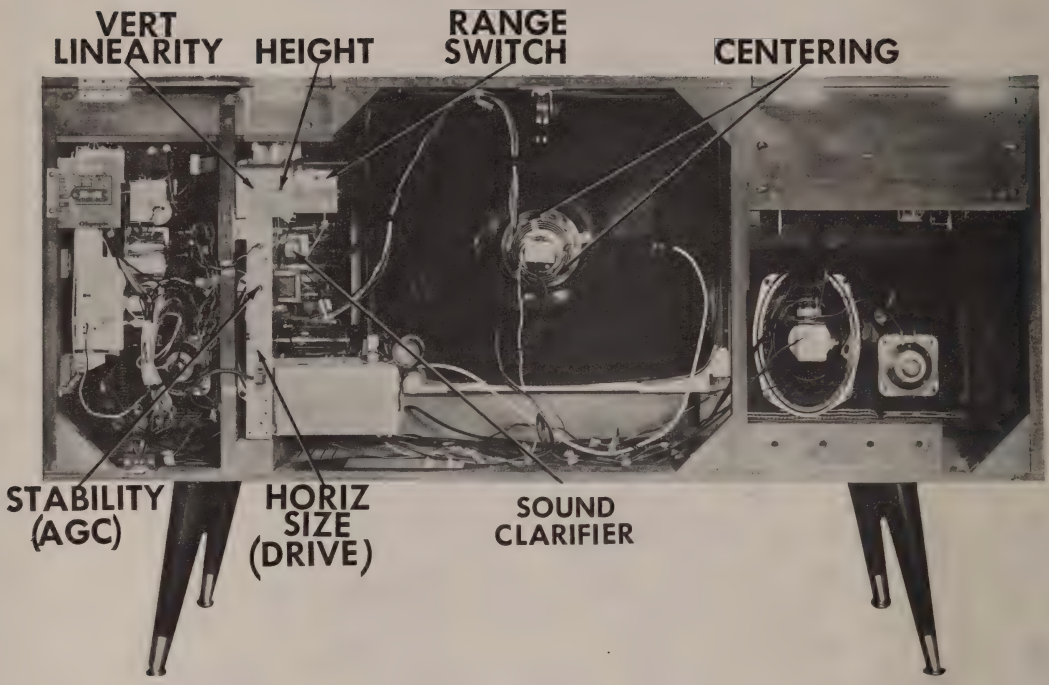
NOTE: TUBE PLACEMENT IN CHASSIS KB, KD, KRB, & KRD SAME AS CHART SHOWN; CONTROL MOUNTING BRACKET WITH COMPONENTS IS RELOCATED IN SOME VERSIONS.



TV RESISTANCE MEASUREMENTS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BZ6	150K	47Ω	FIL	FIL	▪330Ω	▪330Ω	0Ω		
V2	EF184/ 6EJ7	180Ω	.1Ω	180Ω	FIL	FIL	0Ω	▪330Ω	▪330Ω	0Ω
V3	6GN8	0Ω	100K	▪22K	FIL	FIL	15Ω	5700Ω	†22K	†4500Ω
V4	6BU8	▪0Ω	†6800Ω	1.9meg	FIL	FIL	• †20K	†1.8meg	†47K	†10meg
V5	6DT6	3Ω	560Ω	FIL	FIL	†660K	▪10K	560K		
V6	6CU5	¶ 80K	500K	FIL	FIL	500K	†440Ω	†655Ω		
V7	6CM7	†2700Ω	NC	0Ω	FIL	FIL	•†2.2meg	• 1.4meg	• 1.8meg	100Ω
V8	6CG7	†10K	2.1meg	820Ω	FIL	FIL	†82K	68K	820Ω	0Ω
V9	6DQ6A	TP	FIL	NC	†8900Ω	470K	TP	FIL	0Ω	TOP CAP †40Ω
V10	6AX4GTB	NC	NC	†120K	NC	†50Ω	NC	FIL	FIL	
V11	1G3GT		PINS	1 THRU 8	HAVE	INFINITE	RESISTANCE			TOP CAP †560Ω
V12	5U4GB	NC	¶ 40K	NC	46Ω	TP	42Ω	TP	¶ 40K	
V13	23ANP4	FIL	22K	Pin 6 †70K	Pin 10 †70K	Pin 11 • 200K	Pin 12 FIL			
V201	6CY5	5meg	0Ω	FIL	FIL	▪330Ω	▪16K	0Ω		
V202	6CG8A	15K	▪10K	0Ω	FIL	FIL	▪2100Ω	▪330Ω	0Ω	105K
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
• THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION.
† MEASURED FROM PIN 8 OF V12. ▪ MEASURED FROM PIN 1 OF V6.
† MEASURED FROM PIN 3 OF V10. NC NO CONNECTION TP TIE POINT



CABINET—REAR VIEW

HORIZONTAL SWEEP CIRCUIT ADJUSTMENTS

Turn the set on and allow it to warm up for 2 minutes. Tune in a TV station, preferably with a test pattern.

Connect a clip lead from point ⏚ to chassis. Connect another clip lead across the Horizontal Stabilizing Coil (L19).

Adjust the Horizontal Hold until the picture synchronizes horizontally. (It may float back and forth.)

Remove the clip lead from L19. Adjust the Horizontal Frequency Slug (B1) until the picture is again in frequency. Remove clip lead from point ⏚ and chassis. Turn Horizontal Drive Trimmer (B2) counterclockwise until a vertical white line (drive line) appears near the center of the screen, then turn clockwise until line just disappears. If drive line cannot be obtained, adjust B2 for proper width.

If B2 is adjusted, recheck adjustment of B1 and Horizontal Hold.

DISASSEMBLY INSTRUCTIONS

TV CHASSIS REMOVAL: MODEL KC366

1. Remove 8 wood screws holding rear cover. Remove rear cover.
2. Remove 7 push-on type knobs on Control Panel.
3. Remove 2 chassis bolts and 1 screw holding chassis bracket.
4. Disconnect speaker plug, yoke plug, picture tube socket, and high voltage lead.
5. Pull bottom of chassis out and pull back.

PHOTOFACT® Folder

PRODUCTION CHANGE BULLETIN

PRODUCTION CHANGE BULLETIN

SUPPLEMENTAL DATA TO PHOTOFACT FOLDER 2 IN SET 503

MOTOROLA MODELS Y21K150B, M, W, Y21K151B, M, W, Y21K152CW, Y21K153B, M, W, Y21K154CW, Y21T73B, M, W, 21K150B, M, W, 21K151B, M, W, 21K152CW, 21K153B, M, W, 21K154CW, 21T73B, M, W (CH. TS-567, Y)

Motorola Models Y21K150B, M, W, Y21K151B, M, W, Y21K152CW, Y21K153B, M, W, Y21K154CW, Y21T73B, M, W, 21K150B, M, W, 21K151B, M, W, 21K152CW, 21K153B, M, W, 21K154CW, 21T73B, M, W (Ch. TS-567, Y) were covered in PHOTOFACT Folder 2 - Set 503.

The following changes were made by the manufacturer during late production.

Chassis Coding A-01

TO REDUCE INTERMITTENT FINE TUNING

The Pre-Set Lever and the Fine Tuning spring on the VHF Tuners is changed. The entire front plate assembly (Part #1V65260A74) should be replaced. The Tuner coding was changed to "B" when this change was incorporated.

Chassis Coding A-02

TO REDUCE BUSY BACKGROUND

R10 is increased from 1meg to 1.5meg.

TO IMPROVE FOCUS ADJUSTMENT

A focus adjust terminal strip is added replacing the focus strap used on the picture tube base.

Chassis Coding A-03

TO PREVENT POSSIBILITY OF ARCING INSIDE PICTURE TUBE

A 33K Resistor is added from the center lug of the focus terminal strip to the 245V "A" Source. This change is recommended on all sets that have the focus adjustment terminal strip.

Chassis Coding A-04

TO FACILITATE VIDEO ALIGNMENT

C19 is increased from 470mmf to 560mmf.

(Continued On The Reverse Side)

SUPPLEMENTAL DATA TO PHOTOFACT FOLDER 1 IN SET 533

MOTOROLA MODELS Y19P10-1, -2, 19P10-1, -2 (CH. TS-435, Y)

Motorola Models A19T2-3, -4, -5, Y19K11W, WA, Y19K12M, MA, W, WA, Y19K13CW, CWA, Y19K14M, MA, W, WA, Y19K15CW, CWA, Y19P3-1, -2, Y19T2-3, -4, -5, 19K11W, WA, 19K12M, MA, W, WA, 19K13CW, CWA, 19K14M, MA, W, WA, 19K15CW, CWA, 19P3-1, -2, 19T1-3, -4, -5 (Ch. STS-435, Y, TS-435, Y, WTS-435) were covered in PHOTOFACT Folder 1- Set 533.

Models Y19P10-1, -2, 19P10-1, -2 (Ch. TS-435, Y) are electrically similar except for the following changes.

Chassis Coding A-06

TO REDUCE HORIZONTAL SIZE OVERDRIVE

R5 (Horizontal Size Control) is increased from 5000Ω 2 watt to 10K 2 watt.

R70 is deleted.

R71 is increased from 6800Ω 3 watt to 15K 2 watt.

Jumper Wire #3 is deleted from Pin 8 of V10 (12DQ6B). It is replaced with a 22Ω 2 watt resistor.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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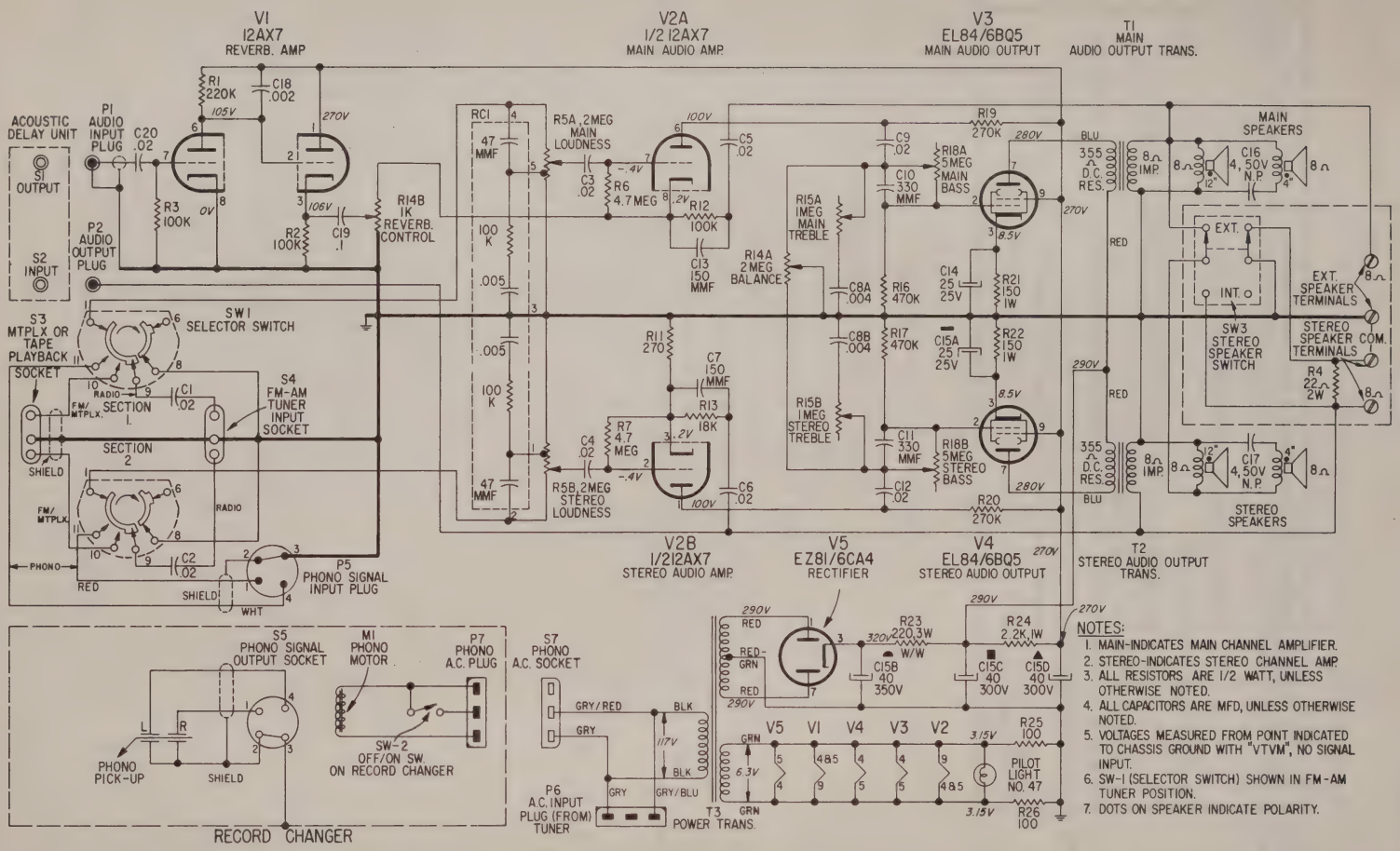
Chassis Coding A-05	DESIGN CHANGE K1 (Vert. Blanking Couplate) is replaced with individual components of the same value.
Chassis Coding A-06	TO CENTER VERTICAL HOLD CONTROL R53 is increased from 1.5meg to 2.2meg. TO INCREASE VERTICAL STABILITY C45 is increased from .015mfd to .02mfd. R56 is deleted. This side of the Vertical Size Control is wired to ground. A 470K Resistor is inserted between the 510V Boost and the Vertical Size Control. TO CORRECT FOR PHASE SHIFT C18 is deleted. R22 is deleted. The junction of R19 and the secondary winding of L6 is grounded. TO FURTHER REDUCE BUSY BACKGROUND R16 is increased from 120K to 220K. R17 is increased from 100K to 180K. R10 is increased to 2meg 5%. R9 is decreased from 15meg to 12meg 5%. An 18K Resistor is added between pins 2 and 7 of V2 (3BZ6).

Chassis Coding A-07	TO PREVENT ARC TO GROUND FROM 260VD A .01 mfd @ 1400 volts capacitor is added from the 260VD side of R14 to ground.
Chassis Coding A-08	TO PREVENT FAILURE OF NOISE GATE CONTROL C34 is changed from .01 mfd @ 500 volts to .01 mfd @ 1400 volts.
Chassis Coding CS-C	TO INCREASE PILOT LAMP LIFE A 100Ω resistor is added between the 1000Ω 15 watt resistor and the Pilot Lamps.
Chassis Coding HV-B	TO IMPROVE THE RELIABILITY OF THE HV RECTIFIER (3A3) A 2.2Ω resistor is added between lugs 2 and 6 of V12 (3A3). The white lead is relocated from lug 2 to lug 6 of the HV Rectifier (3A3).

SUPPLEMENTAL DATA TO PHOTOFACT FOLDER 12 IN SET 534		SILVERTONE MODELS 2079, 2080, 2081, 2082 (CH. 528.54200, 528.59910)
	Silvertone Models 1065, 1067 (Ch. 528.54050, 528.59840) were covered in PHOTOFACT Folder 12 - Set 534. Models 2079, 2080, 2081, 2082 (Ch. 528.54200, 528.59910) are electrically similar except for the following changes.	
Ch. 528.59910	COMPONENT ADDED A Reverb Amp (12AX7) and a Reverb Control is added. A schematic diagram showing the amp is given in this bulletin.	

(Continued On The Reverse Side)



SILVERTONE CHASSIS 528.59910

Schematic Diagram Courtesy of Sears, Roebuck & Company

PHOTOFACT® Folder

CAPITOL
MODELS 128, 132

CAPITOL
MODELS 128, 132

MODEL 132

CAPITOL
MODELS 128, 132

TRADE NAME	Capitol Models 128, 132
MANUFACTURER	Capitol Records, Inc., 1 S. Webster Ave., Scranton 5, Pa.
TYPE SET	AC Operated 4 Tube Stereo Phono Amplifier With 4 Speed Automatic Record Changer
POWER SUPPLY	110 - 120 Volts AC, 60 Cycles RATING 63 Watts, . 62 Amp. @ 117 Volts AC (Less Motor)

FOR SERVICE INFORMATION ON RECORD CHANGER — SEE SIMILAR V-M 1201 — PHOTOFACT SET 436 FOLDER 18
OR RECORD CHANGER MANUAL RC-12

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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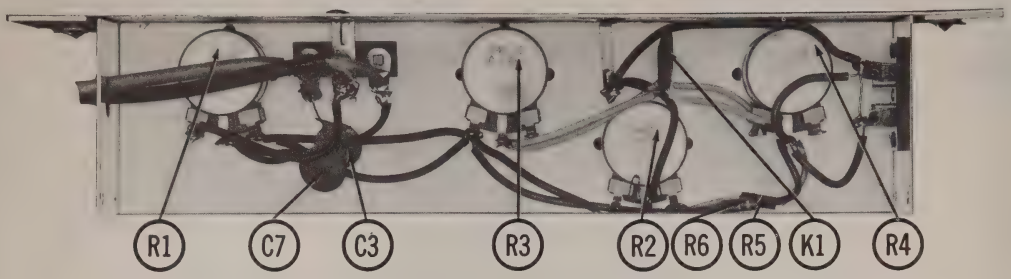
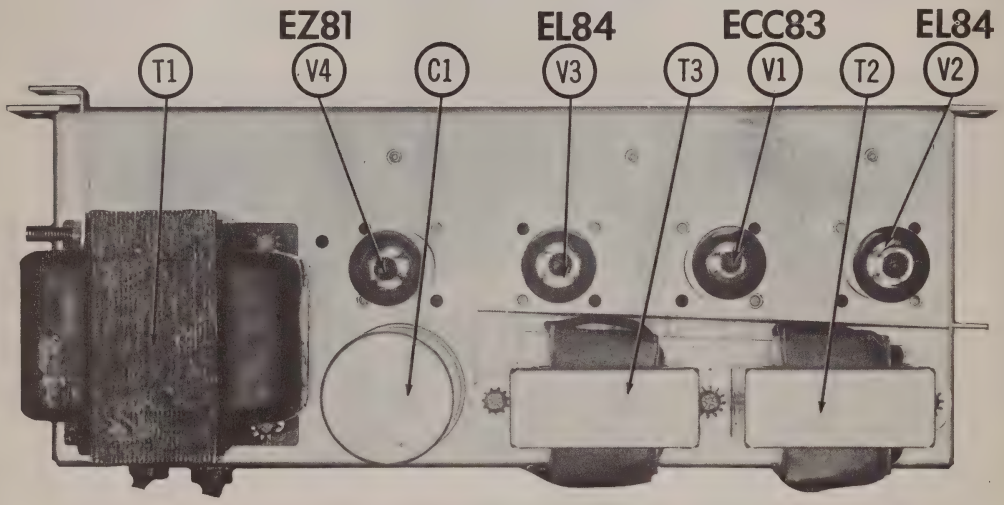
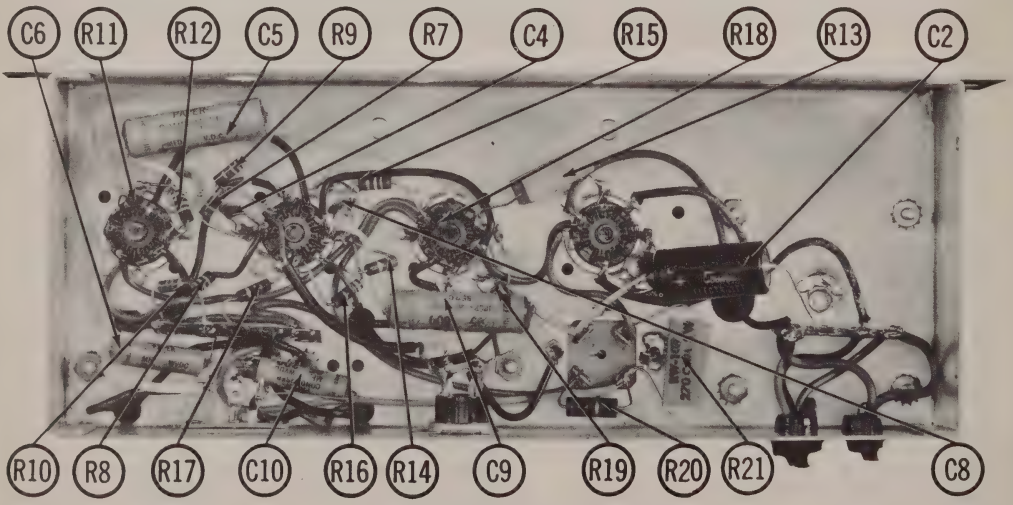


CONTROL PANEL



CHASSIS-TOP VIEW



CHASSIS-BOTTOM VIEW

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE (GENERAL ELECTRIC • RAYTHEON • SYLVANIA)
V1	Channel 1 AF Amp. - Channel 2 AF Amp.	ECC83/12AX7
V2	Channel 1 Output	EL84 (6BQ5) *
V3	Channel 2 Output	EL84 (6BQ5) *
V4	Rectifier	EZ81/6CA4

* Alternate

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA CAPITOL PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	▲80	400	165-002	AFH4-57-50	D0478	XC4-82	WP422	TMQ-4379	TVL-4739.6
B	▲40	350							
C	▲40	300							
D	50	25							
C2	100	25	150-004	PRS1270	BBR100-25	QT1-23	TC2501	TD-100-25	TVA-1207

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C3	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C4	100		DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C5	.05 600V		P688N-05	DD-503	CUB6S5	6DP-3-503	GEM-615	6TM-S50
C6	.05 200V		P688N-05	DD-503	CUB2S5	4DP-3-503	GEM-415	2TM-S50
C7	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C8	100		DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C9	.05 600V		P688N-05	DD-503	CUB6S5	6DP-3-503	GEM-615	6TM-S50
C10	.05 200V		P688N-05	DD-503	CUB2S5	4DP-3-503	GEM-415	2TM-S50
C11	2mfd 200V		P288N-2.0		WMF1W2E			
C12	2mfd 200V		P282Z-2.0		WMF1W2E			

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA CAPITOL PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	3meg		130-033 ①					Loudness, Channel 1
B	3meg							Loudness, Channel 2
R2A	3meg		130-058 ②	B-84	A47-3meg-S	Q11-140	U57	Balance
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R3A	500K		130-034 ③	B-613			FA55R	Treble, Channel 1
B	500K			SR-613			RU55R	Treble, Channel 2
C	Shaft			Not Req.			CS3500	
R4A	3meg		130-033 ①					Bass, Channel 1
B	3meg							Bass, Channel 2

① Model 128 uses Part #130-053.
② Model 128 uses 4meg. Part #130-063.
③ Model 128 uses Part #130-062.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R5	100K			
R6	100K			
R7	6.8meg			
R8	270K			
R9	330Ω			
R10	5600Ω			(2700Ω) *
R11	1000Ω			
R12	470K			
R13	82Ω 3W	PW3-82	3G-82	
R14	6.8meg			
R15	270K			
R16	330Ω			
R17	5600Ω			(2700Ω) *
R18	1000Ω			
R19	470K			
R20	1200Ω 1W			
R21	270Ω 5W	PW5-270	5W-SQ-270	

* Value used in Model 128.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	CAPITOL PART No.	REPLACEMENT DATA
K1	Tone Comp.	.002mfd, .002mfd, 100K, 100K	PC-4747	

CROSSOVER CHOKE

ITEM No.	RATINGS CURRENT (Measured)	RATINGS DC RES.	RATINGS INDUCTANCE (0 CURRENT 1000 ∿)	REPLACEMENT DATA CAPITOL PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
L1		2Ω CT	32MH CT	220-016					①Not used in Model 128
L2		.2Ω	1.6MH	220-017①					

TRANSFORMER (POWER)

ITEM No.	RATING PRI.	RATING SEC. 1	RATING SEC. 2	REPLACEMENT DATA CAPITOL PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	117V② .62A	500VCT ② .100A DC	6.3V② 2.7A	200-001	P-3148①	PC-8420①	24R13U①②	R110A①②	① Drill New Mounting Hole(s). ② Tape 5V winding and CT on 6.3V winding.

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA CAPITOL PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	5400Ω	3-4Ω	210-016①	A-3019	A-8092	26S49	S-5Z	① Model 128 uses Part #210-015
T3	5400Ω	3-4Ω	210-016 ①	A-3019	A-8092	26S49	S-5Z	

SPEAKER

ITEM No.	TYPE SIZE	TYPE FIELD	TYPE V. C. IMP.	REPLACEMENT DATA CAPITOL PART No.	QUAM PART No.	NOTES
SP1	6"x 9"	PM	3-4Ω	229-034 *		* Used in Model 132 Only.
SP2	2"x 6"	PM	6-8Ω	229-033		
SP3	8"x 13⅜"	PM	3-4Ω	229-015		‡ Used in Model 128 Only.
SP4	6"x 9"	PM	3-4Ω	229-034 *		
SP5	2"x 6"	PM	6-8Ω	229-033		
	3" x 5"	PM		229-032 ‡		

PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

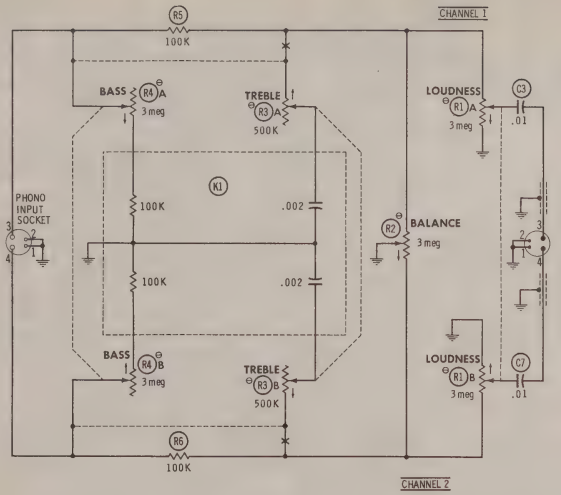
ITEM No.	CAPITOL PART No. CARTRIDGE	CAPITOL PART No. NEEDLE*	ASTATIC PART No. CARTRIDGE	ASTATIC PART No. NEEDLE*	ELECTRO-VOICE PART No. CARTRIDGE	ELECTRO-VOICE PART No. NEEDLE*	SONOTONE PART No. CARTRIDGE	SONOTONE PART No. NEEDLE*	NOTES
M1	380-018	Not Req.	13TX	Not Req.	13	Not Req.	10T2-S	Not Req.	

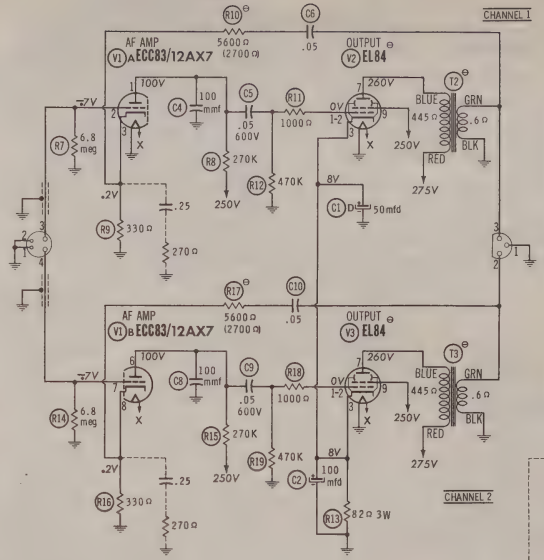
CABINETS & CABINET PARTS

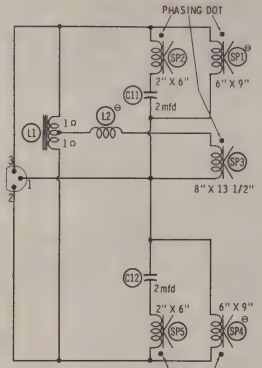
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

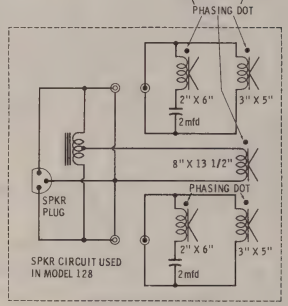
WIRING DATA

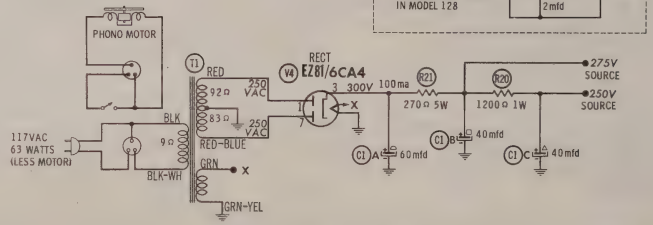
General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord	Use BELDEN No. 1765-B (6 Ft. Length) 1725-K (7½ Ft. Length)
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor - Twisted)











RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC83 12AX7	†270K	6.8meg	330Ω	FIL	FIL	†270K	6.8meg	330Ω	FIL
V2	EL84	NC	470K	82Ω	FIL	FIL	TP	†715Ω	TP	†1500Ω
V3	EL84	NC	470K	82Ω	FIL	FIL	TP	†715Ω	TP	†1500Ω
V4	EZ81 6CA4	92Ω	NC	¶	FIL	FIL	TP	83Ω	NC	NC

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
† MEASURED FROM PIN 3 OF V4. NC NO CONNECTION TP TIE POINT

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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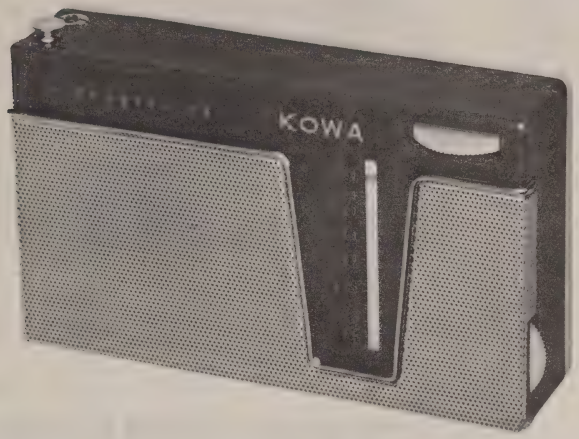
CAPITOL MODELS 128, 132

PHOTOFACT® Folder with CIRCUITRACE™

KOWA
MODEL KT-81

KOWA
MODEL KT-81



KOWA
MODEL KT-81

TRADE NAME	Kowa Model KT-81
SUPPLIER	Longwood Radio Distributors, Inc., 1261 Broadway, Suite 704, New York 1, N. Y.
TYPE SET	Battery Operated Transistorized Portable AM Receiver
POWER SUPPLY	9 Volts DC RATING 9MA @ 9 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	540 – 1600KC 20MA @ 9 Volts DC (Signal, Normal Volume)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1, A2, A3, A5.... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538
A4, A6..... GENERAL CEMENT #5000, 5003, 8276, 8290
WALSCO #2512, 2515, 2522, 2523, 2525, 2537

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.	455KC (400% Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
2.	"	1600KC	1600KC	"	A4	"
3.	"	600KC	600KC	"	A5	"
4.	"	1400KC	1400KC Signal.	"	A6	Adjust for maximum output. Repeat Steps 2, 3 and 4.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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KF688

SET 554 FOLDER 5

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA159	Mixer	2N412		PNP
X2	2SA159	Oscillator	2N412		PNP
X3	2SA155	1st IF Amplifier	2N410		PNP
X4	2SA155	2nd IF Amplifier	2N410		PNP
X5	2SB112	AF Amplifier	2N406		PNP
X6	2SB112	Driver	2N406		PNP
X7	2SB115	Output	2N408		PNP
X8	2SB115	Output	2N408		PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	KOWA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	10	3		PTT6	NLW10-3	MT1-5	TT3X10	MLV10-3	TE-1053
C2	10	3		PTT6	NLW10-3	MT1-5	TT3X10	MLV10-3	TE-1053
C3	30	3		PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C4	10	3		PTT6	NLW10-3	MT1-5	TT3X10	MLV10-3	TE-1053
C5	30	3		PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C6	30	10		PTT43	NLW30-15	MT1-14	TT15X30	MLV40-12	TE-1158
C7	30	10		PTT43	NLW30-15	MT1-14	TT15X30	MLV40-12	TE-1158

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C8	2		NPO-DI 2.0	DTZ-2R2	C10V2C	CCTO-2R2	CNO-522	10TCC-V22
C9	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C10	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C11	.02		C80V203AM	DM-203	H-05S2		TA-120	TG-S20
C12	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C13	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C14	2		NPO-DI 2.0	DTZ-2R2	C10V2C	CCTO-2R2	CNO-522	10TCC-V22
C15	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C16	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C17	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C18	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C19	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	KOWA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	5000Ω	1/4		B16-214				Volume & Switch

RESISTORS

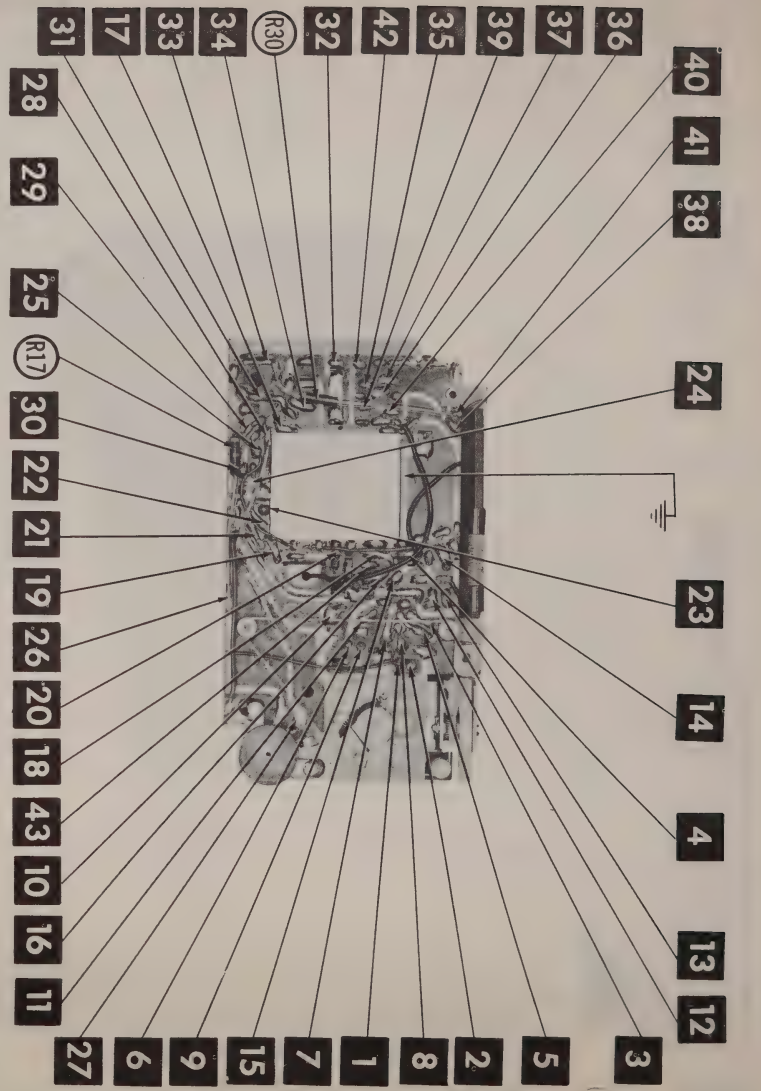
All wattages 1/2 watt, or less, unless otherwise listed.

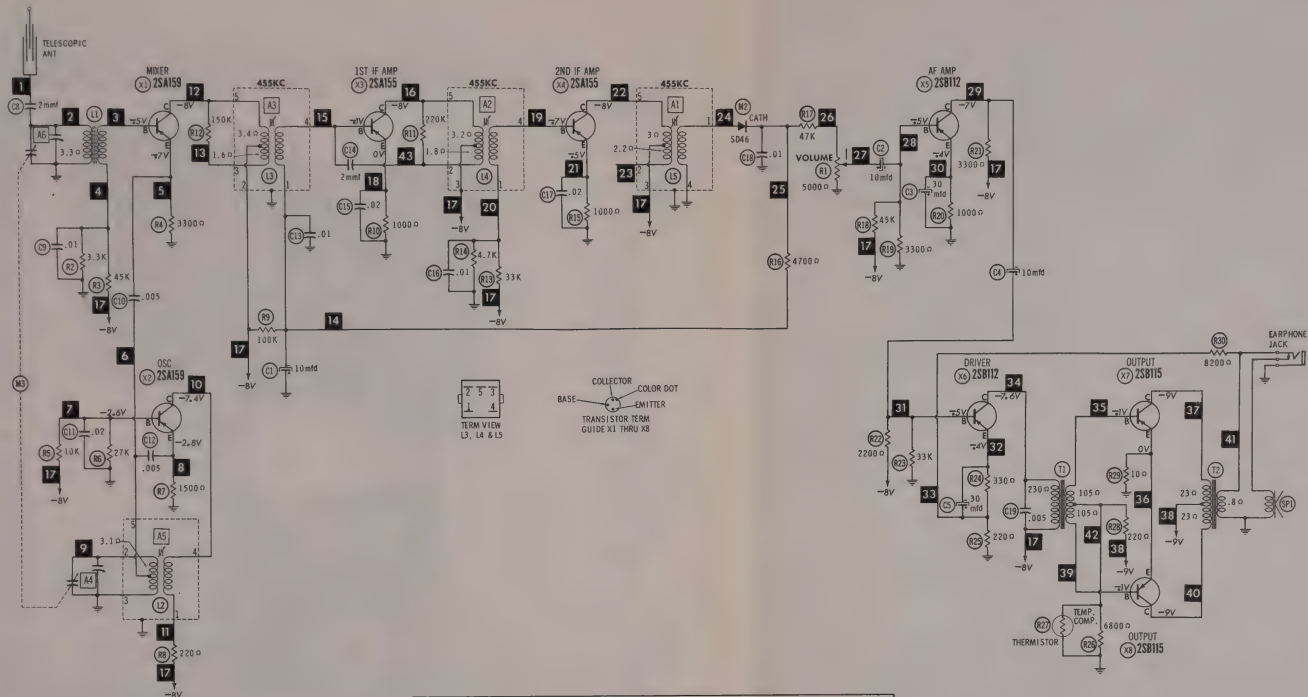
ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R2	3300Ω				R9	100K			
R3	45K				R10	1000Ω			
R4	3300Ω				R11	220K			
R5	10K				R12	150K			
R6	27K				R13	33K			
R7	1500Ω				R14	4700Ω			
R8	220Ω				R15	1000Ω			

(CONTINUED ON REAR PAGE)

A Howard W. Sams CIRCUITRACE® Photo

PRINTED BOARD





RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

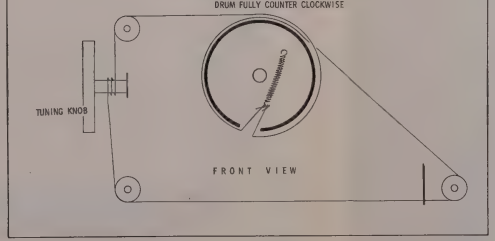
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

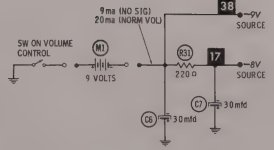
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

DIAL CORD STRINGING





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KOWA
MODEL KT-81

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R16	4700Ω				R24	330Ω			
R17	47K				R25	220Ω			
R18	45K				R26	6800Ω			
R19	3300Ω				R27	Temp. Comp.			
R20	1000Ω				R28	220Ω			
R21	3300Ω				R29	10Ω			
R22	2200Ω				R30	8200Ω			
R23	33K				R31	220Ω			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		KOWA PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	Loopstick						
L2	Osc.						
L3	1st IF						
L4	2nd IF						
L5	3rd IF						

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	KOWA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	1.4	1	U-410			TR-40 ①		① Use Original Frame

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	KOWA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	400Ω CT	6-8Ω	U-411		TA-21 ①			① Use 8Ω Secondary

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	KOWA PART No.	QUAM PART No.	
SP1	2 1/4"	PM	6-8Ω		22A06Z8	

BATTERIES

ITEM No.	VOLTAGE	KOWA PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	9V	006P		2U6		216		M-1604	

SIGNAL DIODES

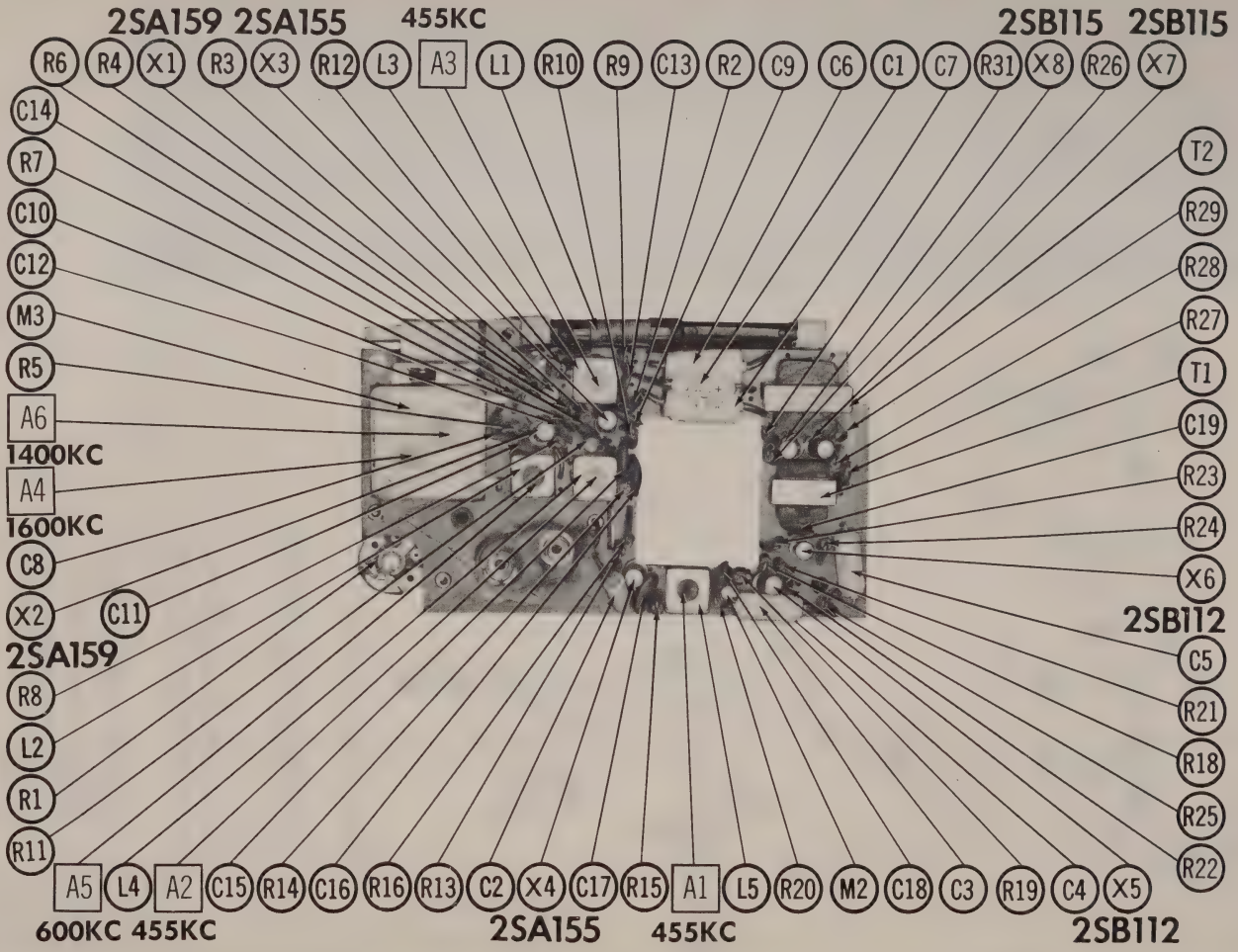
ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		KOWA PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M2	SD46			1N60	Detector (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	KOWA PART No.	NOTES
M3	Tuning Cap.		2 Gang

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

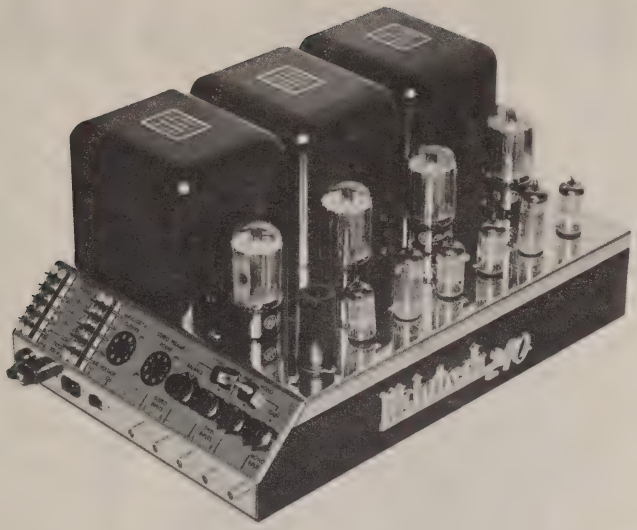


CHASSIS TOP VIEW

PHOTOFACT® Folder

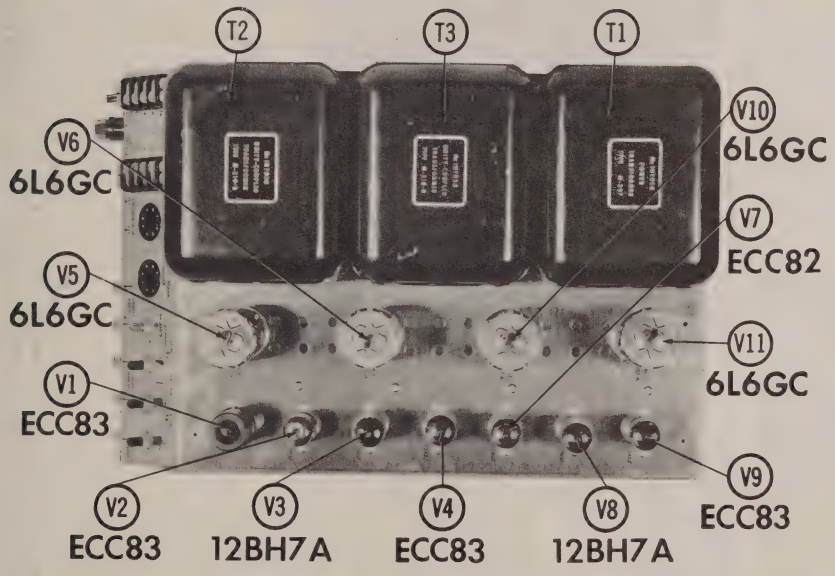
McINTOSH
MODEL MC-240

McINTOSH
MODEL MC-240



TRADE NAME	McIntosh Model MC-240 (Serial #1P001 and above)
MANUFACTURER	McIntosh Laboratory, Inc., 2 Chambers Street, Binghamton, N. Y.
TYPE SET	AC Operated 11 Tube Stereo Amplifier
POWER SUPPLY	105 — 130 Volts AC, 50-60 Cycles RATING 160 Watts, 1.7 Amp. @117 Volts AC

McINTOSH
MODEL MC-240



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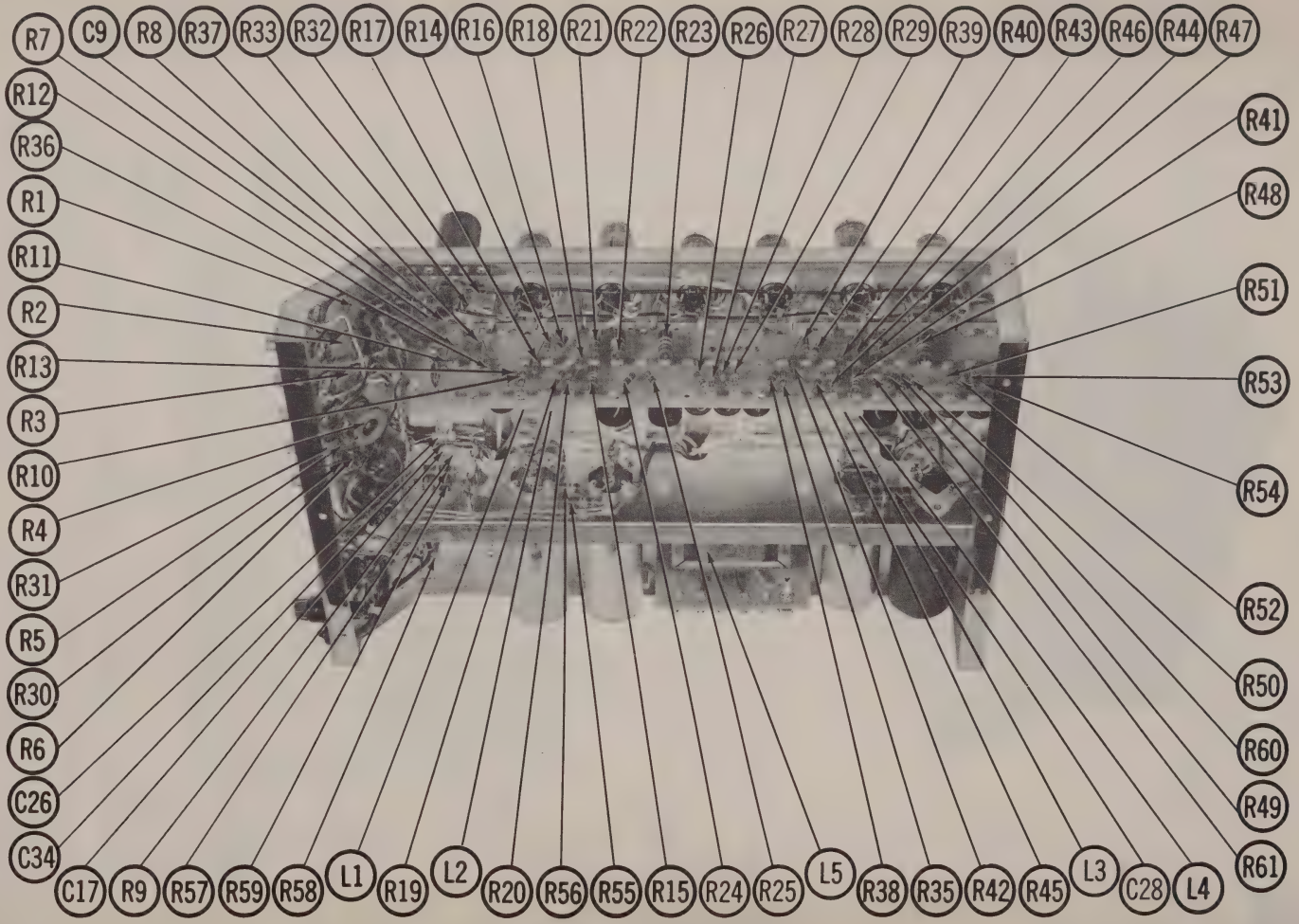
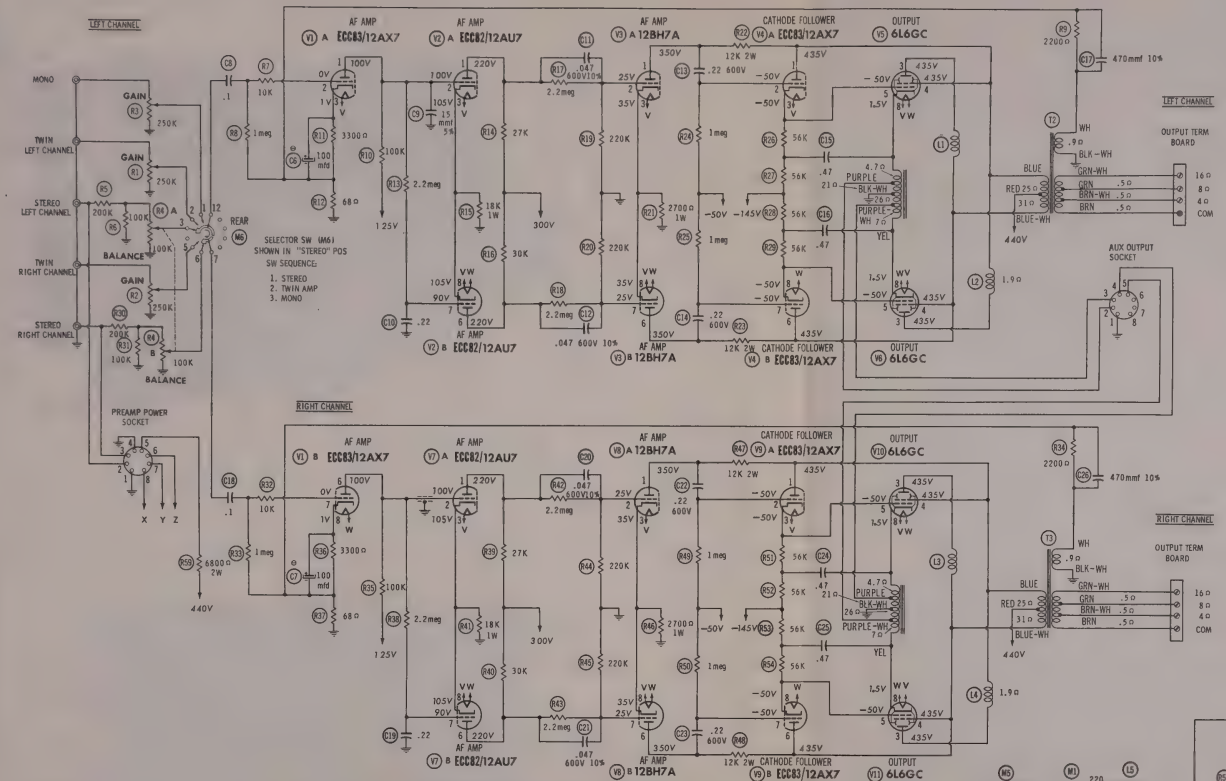
KV788

SET 554 FOLDER 6



CHASSIS BOTTOM VIEW



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC83 12AX7	†210K	1meg	3300Ω	FIL	FIL	†210K	1meg	3300Ω	FIL
V2	ECC82 12AU7	†37K	†210K	18K	FIL	FIL	†40K	†2.4meg	18K	FIL
V3	12BH7A	†12K	210K	2700Ω	FIL	FIL	†12K	210K	2700Ω	FIL
V4	ECC83 12AX7	†55Ω	1meg	270K	FIL	FIL	†61Ω	1meg	270K	FIL
V5	6L6GC	NC	FIL	†61Ω	†55Ω	270K	NC	FIL	26Ω	
V6	6L6GC	NC	FIL	†55Ω	†61Ω	270K	NC	FIL	33Ω	
V7	ECC82 12AU7	†37K	†210K	18K	FIL	FIL	†40K	†2.4meg	18K	FIL
V8	12BH7A	†12K	210K	2700Ω	FIL	FIL	†12K	210K	2700Ω	FIL
V9	ECC83 12AX7	†55Ω	1meg	270K	FIL	FIL	†61Ω	1meg	270K	FIL
V10	6L6GC	NC	FIL	†61Ω	†55Ω	270K	NC	FIL	26Ω	
V11	6L6GC	NC	FIL	†55Ω	†61Ω	270K	NC	FIL	33Ω	

† MEASURED FROM OUTPUT OF M1. NC NO CONNECTION

1. DC voltage measurements taken with vacuum tube voltmeter, AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

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McINTOSH MODEL MC-240

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE (• GENERAL ELECTRIC • RAYTHEON • SYLVANIA •)
V1	Left Channel AF Amp. - Right Channel AF Amp.	ECC83/12AX7
V2	Left Channel AF Amp.	ECC82/12AU7
V3	Left Channel AF Amp.	12BH7A
V4	Left Channel Cath. Follower	ECC83/12AX7
V5	Left Channel Output	6L6GC (7027) *
V6	Left Channel Output	6L6GC (7027) *
V7	Right Channel AF Amp.	ECC82/12AU7
V8	Right Channel AF Amp.	12BH7A
V9	Right Channel Cath. Foll.	ECC83/12AX7
V10	Right Channel Output	6L6GC (7027) *
V11	Right Channel Output	6L6GC (7027) *

* Alternate

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA McIntosh PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	250	250		AFH1-37-35	XA0318	XC1-23	WP132	TMS-1590	TVL-1590
C2	250	250		AFH1-37-35	XA0318	XC1-23	WP132	TMS-1590	TVL-1590
C3A	▲100	500	) (	AFH1-63				TMD-2790	TVLS-2950*
B	▲30	450	) (	PRS1740					
C4A	▲100	500	) (	AFH1-63				TMD-2790	TVLS-2950*
B	▲30	450	) (	PRS1740					
C5	12	250		PRS1560	BR1235	QT1-8	TC53	TD-12-250	TVA-1505
C6	100	12	Note 1	PRS1150	BBR100-15	QT1-23	TC2501	TD-100-15	TVA-1130
C7	100	12	Note 1	PRS1150	BBR100-15	QT1-23	TC2501	TD-100-15	TVA-1130

Note 1. Some versions may use 3 volt unit in this application.
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C8	.1 200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C9	15 5%		NPO-DI 15	DTZ-15	C10Q15C	CCTO-150	CNO-415	10TCC-Q15
C10	.22 400V		P488N-22		CUB4P22	4DP-5-224	GEM-4022	4TM-P22
C11	.047 600V 10%		V84C6S47-10%		PM6S47	6DP-3-473	GEM-1615	6TM-S47
C12	.047 600V 10%		V84C6S47-10%		PM6S47	6DP-3-473	GEM-1615	6TM-S47
C13	.22 600V		P688N-22		CUB6P22	6DP-5-224	GEM-6022	6TM-P22
C14	.22 600V		P688N-22		CUB6P22	6DP-5-224	GEM-6022	6TM-P22
C15	.47 200V		P288N-47		CUB2P47	2DP-5-474	GEM-2047	2TM-P47
C16	.47 200V		P288N-47		CUB2P47	2DP-5-474	GEM-2047	2TM-P47
C17	470 10%			D6-471	5R5T47	CCD-471	GP347	10TS-T47
C18	.1 200V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C19	.22 400V		P488N-22		CUB4P22	4DP-5-224	GEM-4022	4TM-P22
C20	.047 600V 10%		V84C6S47-10%		PM6S47	6DP-3-473	GEM-1615	6TM-S47
C21	.047 600V 10%		V84C6S47-10%		PM6S47	6DP-3-473	GEM-1615	6TM-S47
C22	.22 600V		P688N-22		CUB6P22	6DP-5-224	GEM-6022	6TM-P22

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C23	.22 600V		P688N-22		CUB6P22	6DP-5-224	GEM-6022	6TM-P22
C24	.47 200V		P288N-47		CUB2P47	2DP-5-474	GEM-2047	2TM-P47
C25	.47 200V		P288N-47		CUB2P47	2DP-5-474	GEM-2047	2TM-P47
C26	470 10%			D6-471	5R5T47	CCD-471	GP347	10TS-T47
C27	.01 600V		P688N-01	D6-103	CUB6S1	6DP-2-103	GEM-611	6TM-S10
C28	.01 600V		P688N-01	D6-103	CUB6S1	6DP-2-103	GEM-611	6TM-S10

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA Mc Intosh PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	250K	1/2	R-106-2	B-5i	A47-250K-Z	Q13-130	U44	Gain, Left Channel
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R2A	250K	1/2	R-106-2	B-5i	A47-250K-Z	Q13-130	U44	Gain, Right Channel
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R3A	250K	1/2	R-106-2	B-5i	A47-250K-Z	Q13-130	U44	Gain, Monaural
B	Shaft			Not Req.	KSS-3	Not Req.	Not Req.	
R4A	100K	1/2	R-106-1	B-41				Balance, Left Channel
B	100K	1/2		SR-42				Balance, Right Channel

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS	ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R5	200K				R23	12K 2W			
R6	100K				R24	1meg			
R7	10K				R25	1meg			
R8	1meg				R26	56K			
R9	2200Ω				R27	56K			
R10	100K				R28	56K			
R11	3300Ω				R29	56K			
R12	68Ω				R30	200K			
R13	2.2meg				R31	100K			
R14	27K				R32	10K			
R15	18K 1W				R33	1meg			
R16	30K				R34	2200Ω			
R17	2.2meg				R35	100K			
R18	2.2meg				R36	3300Ω			
R19	220K				R37	68Ω			
R20	220K				R38	2.2meg			
R21	2700Ω 1W				R39	27K			
R22	12K 2W				R40	30K			

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (cont)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R41	18K 1W				R52	56K			
R42	2.2meg				R53	56K			
R43	2.2meg				R54	56K			
R44	220K				R55	100K 1W			
R45	220K				R56	100K 1W			
R46	2700Ω 1W				R57	10K 2W			
R47	12K 2W				R58	79Ω@25°C			
R48	12K 2W				R59	6800Ω 2W			
R49	1meg				R60	100K			
R50	1meg				R61	56K			
R51	56K								

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		McIntosh PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	RF Choke(1.5uh)		BC-562	4604	RTC-8516	T856	
L2	RF Choke(2.7uh)		SW-630	4606	RTC-8517	T857	
L3	RF Choke(1.5uh)		BC-562	4604	RTC-8516	T856	
L4	RF Choke(2.7uh)		SW-630	4606	RTC-8517	T857	

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE @ CURRENT 1000 ~	McIntosh PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
L5	.220A	30Ω	1HY	L-106-114	C-4084	C-2343①		C-17X	① Drill new mounting hole(s).

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	McIntosh PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	125V Tap @ 117V @ 1.7A	160V @ .8A AC	6.3V @ 6.3A	T-106-115					
	SEC. 3	SEC. 4	SEC. 5						
	6.3V	115V @ .005A DC							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI. 1	SEC. 1	McIntosh PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	1000Ω CT Tap @ 600Ω CT	16Ω Tap @ 8Ω, 4Ω						
	PRI. 2	SEC. 2						
	1000Ω CT	18Ω						
	PRI. 1	SEC. 1						
T3	1000Ω CT Tap @ 600Ω CT	16Ω Tap @ 8Ω, 4Ω						
	PRI. 2	SEC. 2						
	1000Ω CT	18Ω						

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT (Measured)	Mc Intosh PART No.	RCA PART No.	SARKES TARZIAN PART No.	
M1	.220A		1N1763 †	F6 †	* Selenium † Silicon
M2	.220A		1N1763 †	F6 †	
M3	.005A	*		10 *	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			Mc Intosh PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M4	3AG	3.2A 125V S/B			31303.2 (3AG 3 2/10A 125V S/B)	342001	MDL 3 2/10	HKP
M5	3AG	3A 250V			312003 (3AG 3A 250V)	356001	AGC 3	4405

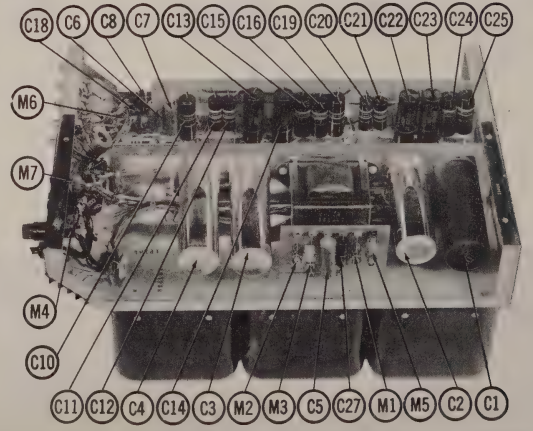
MISCELLANEOUS

ITEM No.	PART NAME	Mc Intosh PART No.	NOTES
M6	Switch		Input Selector (Rotary Wafer Type)
M7	Switch		117—125VAC Selector (SPST Slide Type)

WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

Power Cord ..... Use BELDEN No. 1765-B (6 Ft. Length)
1725-K (7½ Ft. Length)

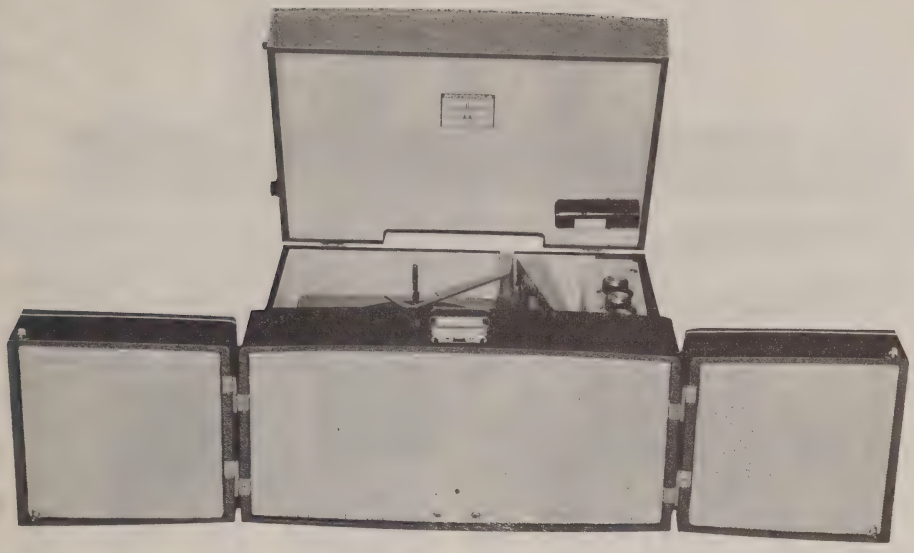


CHASSIS—BOTTOM VIEW

PHOTOFACT® Folder

MOTOROLA MODELS SH20G, SH20N (Ch. HS-827, HS-828)

MOTOROLA MODELS SH20G, SH20N (Ch. HS-827, HS-828)



MODEL SH20G

TRADE NAME	Motorola Models SH20G, SH20N (Ch. HS-827, HS-828)
MANUFACTURER	Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois
TYPE SET	AC Operated 5 Tube Stereo Phono Amplifier With 4 Speed Automatic Record Changer
POWER SUPPLY	110 — 120 Volts AC, 60 Cycles RATING 57 Watts, .56 Amp. @ 117 Volts AC (Less Motor)

FOR SERVICE INFORMATION ON RECORD CHANGER VM35RC — SEE SIMILAR V-M 1201 — PHOTOFACT SET 436 FOLDER 18 OR RECORD CHANGER MANUAL RC-12

MOTOROLA MODELS SH20G, SH20N (Ch. HS-827, HS-828)

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KT813

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PARTS LIST AND DESCRIPTIONS

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord	Use BELDEN No. 1765-B (6 Ft. Length) 1725-K (7½ Ft. Length)
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor - Twisted)

TUBES

◆ GENERAL ELECTRIC ◆ RAYTHEON ◆ SYLVANIA ◆

ITEM No.	USE	TYPE
V1	Channel 1 AF Amp.	12AX7A
V2	Channel 1 Output	6BQ5 (EL84) *
V3	Channel 2 AF Amp.	12AX7A
V4	Channel 2 Output	6BQ5 (EL84) *
V5	Rectifier	6CA4 (EZ81) *

* Alternate

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA MOTOROLA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	▲40	350	23K642239	AFH4-04-50	D0034	XC4-80	FP420.38	TMQ-4298	TVL-4635.3
B	■40	350							
C	▲40	350							
D	40	350							

FIXED CAPACITORS

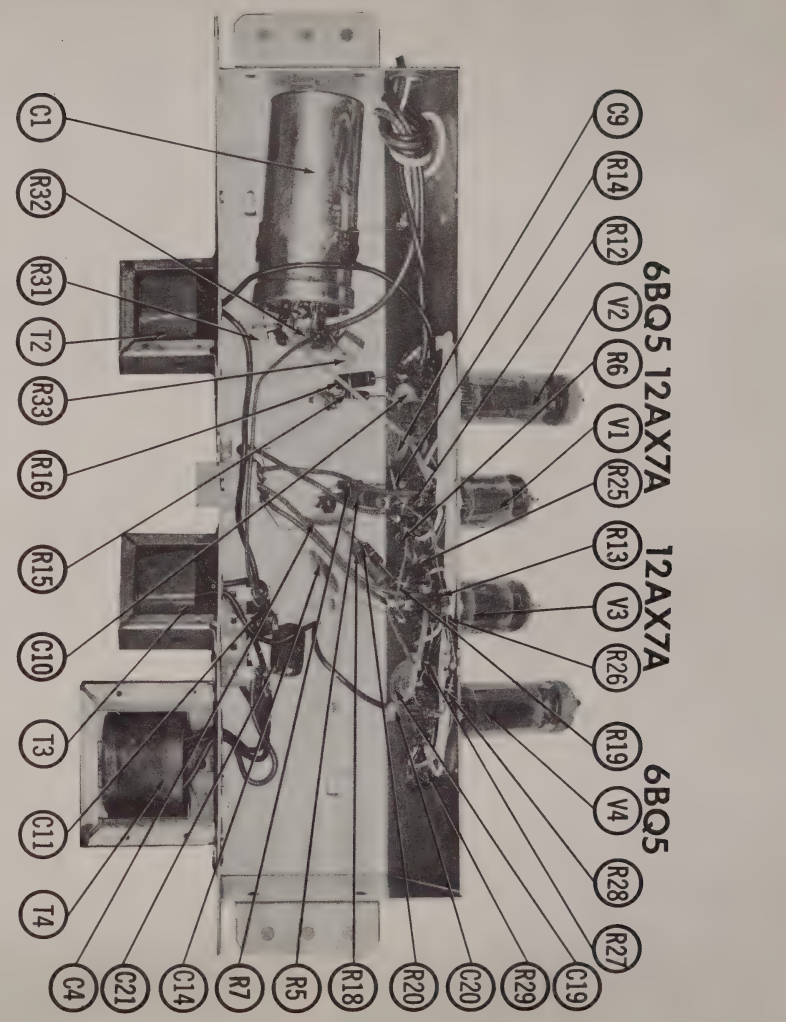
ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C2	680 10%		DI-680	DD-681	5R5T68	CCD-681	GP368	10TS-T68
C3	10 NPO 10%		NPO-DI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C4	.005 10%		DI-5000		PM6D5	CCD-502	JL-250	10TS-D50
C5	100		DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C6	.001 10%		DI-1000	DD-102	PM6D1	CCD-102	GP210	10TS-D10
C7	.002 10%		DI-2000		PM6D2	CCD-202	GP220	10TS-L20
C8	.02 200V		P288N-02	DD-203	CUB2S2	4DP-2-203	GEM-412	2TM-S20
C9	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C10	220		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C11	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C12	680 10%		DI-680	DD-681	5R5T68	CCD-681	GP368	10TS-T68
C13	10 NPO 10%		NPO-DI 10	DTZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C14	.005 10%		DI-5000		PM6D5	CCD-502	JL-250	10TS-D50
C15	100		DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C16	.001 10%		DI-1000	DD-102	PM6D1	CCD-102	GP210	10TS-D10
C17	.002 10%		DI-2000		PM6D2	CCD-202	GP220	10TS-D20
C18	.02 200V		P488N-02	DD-203	CUB2S2	4DP-2-203	GEM-412	2TM-S20
C19	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C20	220		DI-220	DD-221	L10T22	CCD-221	GP322	10TS-T22
C21	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1meg 300K Tap	½	18K646986				FA16T35	Loudness, Right Channel
B	1meg 300K Tap	½					RU16T35	Loudness, Left Channel
C	Shaft						CS3500	
R2A	700K *	½	18D60116A02					Balance
B	Switch							Push-Pull Stereo-Monaural
R3A	2meg	½	18D60116A01	B-76	AD47-2meg-Z		FA26A	Bass, Right Channel
B	2meg	½		SR-76	Not Req.		RU26A	Bass, Left Channel
C	Shaft			Not Req.	FS-3		CS3500	
R4A	2meg	½	18D60116A01	B-76	AD47-2meg-Z		FA26A	Treble, Right Channel
B	2meg	½		SR-76	Not Req.		RU26A	Treble, Left Channel
C	Shaft			Not Req.	FS-3		CS3500	

* Taps and Stops at 105K and 595K.

CHASSIS—BOTTOM VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R5	1meg 1W				R20	820Ω			
R6	150K				R21	180K			
R7	820Ω				R22	22K			
R8	180K				R23	100K			
R9	22K				R24	220K			
R10	100K				R25	150K			
R11	220K				R26	1800Ω			
R12	150K				R27	1meg			
R13	1800Ω				R28	470K			
R14	1meg				R29	150Ω 1W			
R15	470K				R30	100Ω			
R16	150Ω 1W				R31	1200Ω 3W	PW3-1200	3W-SQ-1200	
R17	100Ω				R32	150Ω 3W	PW3-150	3W-SQ-150	
R18	1meg 1W				R33	150Ω 3W	PW3-150	3W-SQ-150	
R19	150K								

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	MOTOROLA PART No.	REPLACEMENT DATA
K1	Loudness Comp.	8000mmf, 8000mmf, 30K, 30K	51K646985	

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	MOTOROLA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V ② .56A	480VCT ③ .090A DC	6.3V ② .9A	25C60395A03-B ①					① Alt. #25C60395A03
	SEC. 3	SEC. 4	SEC. 5						
	6.3VCT ② 2.3A								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	MOTOROLA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	4100Ω	6-8Ω	25B60328A01-A①	A-2901②	A-3823	22S86	S-51X	① Alternate Part #25B60328A01
T3	4100Ω	6-8Ω	25B60328A01-A①	A-2901 ②	A-3823	22S86	S-51X	② Drill New Mtg. Hole(s).
T4	7000Ω CT	6-8Ω	25C60329A01-0 ③	A-2901 ②	A-3870	24S14	S-55X	③ Alternate Part #25C60329A01

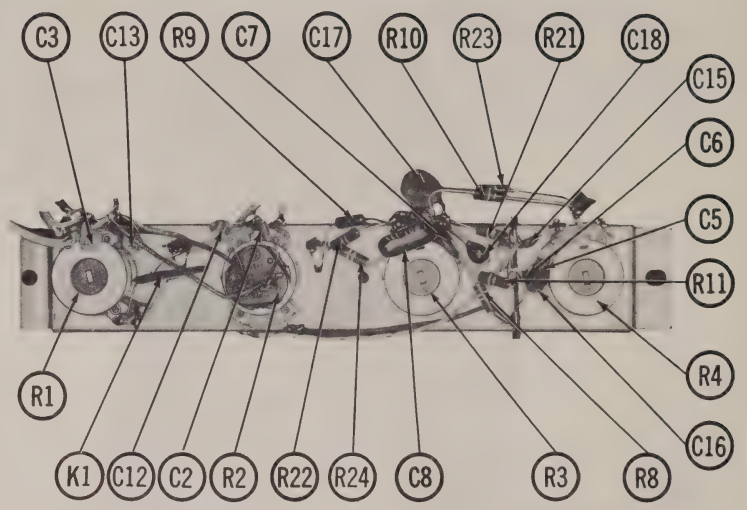
SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	MOTOROLA PART No.	QUAM PART No.	
SP1	5 1/4"	PM	6-8Ω	50K647183	52A1Z8	
SP2	6"	PM	6-8Ω	50K647086	6A21Z8	
SP3	5 1/4"	PM	6-8Ω	50K647183	52A1Z8	

FUSES

ITEM No.	TYPE	RATING	REPLACEMENT DATA					
			MOTOROLA PART No.		LITTELFUSE PART No.		BUSS PART No.	
			FUSE	HOLDER	FUSE	HOLDER	FUSE	HOLDER
M1	3AG	3A 125V P/T	65A646112		315003 (3AG 3A 125V P/T)		MLV3	

CONTROL PANEL



PHONO CARTRIDGE & NEEDLES

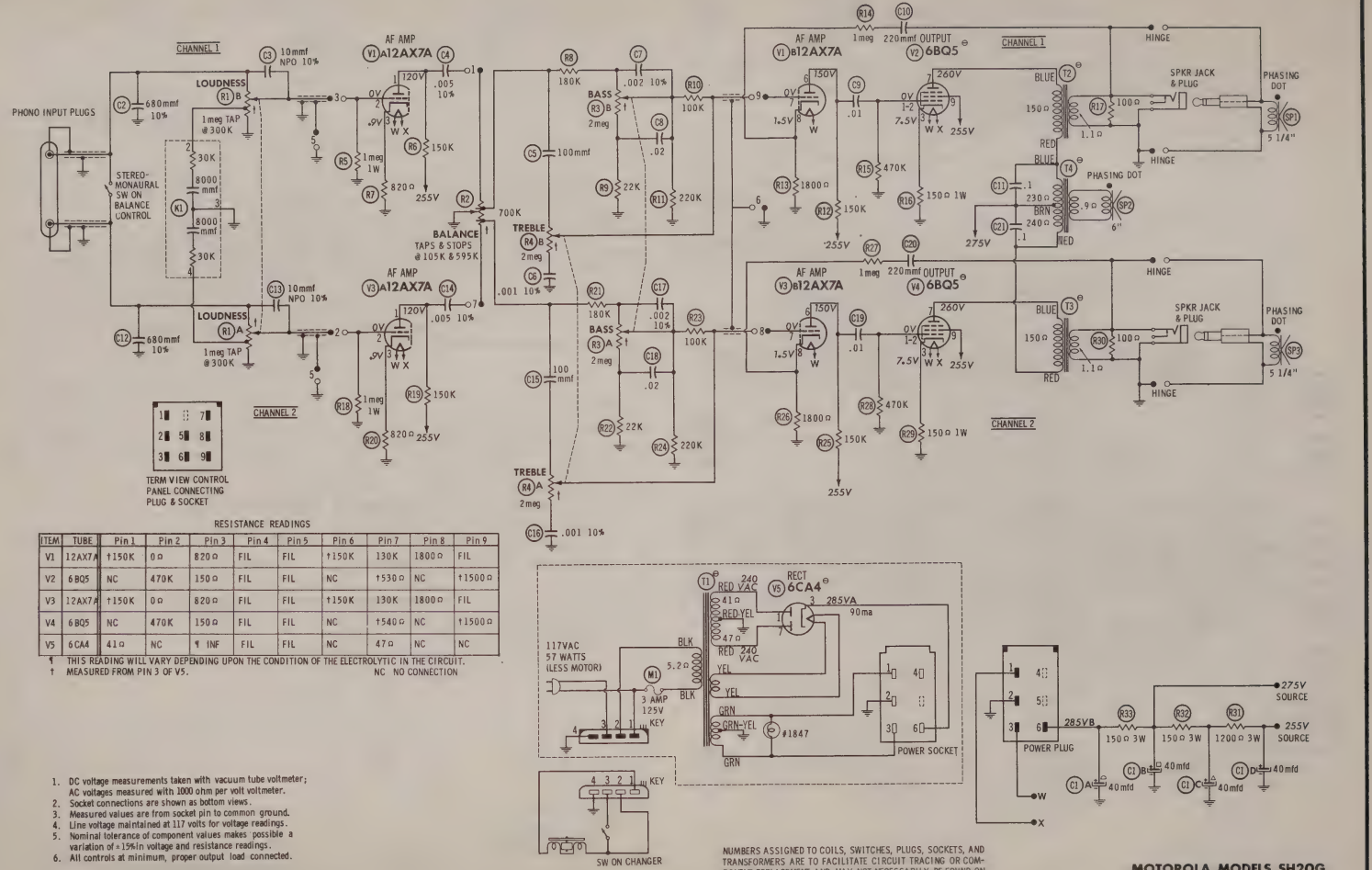
*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA								NOTES
	MOTOROLA PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.		
	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	
M2	59C60335A01	59C60336A04* or 59C60336A05* (LP)	13TB	Not Req.	26S	2604*	9TA4-S	N-9TA-S *	
		59C60336A03* (78RPM)				2605*			

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	36K647037	Loudness, Bass, Treble
Knob	36K647038	Balance
Cabinet	16E60350A02	Charcoal Green, Model SH20G
Cabinet	16E60350A01	Brown Gold, Model SH20N
Base	15K647070	Charcoal, Model SH20G
Base	15E646984	Brown, Model SH20N
Handle	55B60353A02	Model SH20G
Handle	55B60353A01	Model SH20N



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AX7A	†150K	0Ω	820Ω	FIL	FIL	†150K	130K	1800Ω	FIL
V2	6BQ5	NC	470K	150Ω	FIL	FIL	NC	†530Ω	NC	†1500Ω
V3	12AX7A	†150K	0Ω	820Ω	FIL	FIL	†150K	130K	1800Ω	FIL
V4	6BQ5	NC	470K	150Ω	FIL	FIL	NC	†540Ω	NC	†1500Ω
V5	6CA4	41Ω	NC	¶ INF	FIL	FIL	NC	47Ω	NC	NC

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
† MEASURED FROM PIN 3 OF V5. NC NO CONNECTION

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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MOTOROLA MODELS SH20G, SH20N (Ch. HS-827, HS-828)

PHOTOFACT® Folder

POLY COM MODELS PC-2-6, PC-2-12

POLY COM MODELS
PC-2-6, PC-2-12

POLY COM MODELS
PC-2-6, PC-2-12

TRADE NAME	Poly Com Models PC-2-6, PC-2-12
MANUFACTURER	Polytronics Laboratories, Inc., 253 Crooks Ave., Clifton, N. J.
TYPE SET	AC-Battery Operated 11 Tube Crystal Controlled, Double Conversion Citizens Band Transmitter-Receiver
POWER SUPPLY	Model PC-2-6: 110-120 Volts AC, 60 Cycles (or) 6 Volt Storage Battery Model PC-2-12: 110-120 Volts AC, 60 Cycles (or) 12 Volt Storage Battery
RATING	51 Watts, .5 Amp. @ 117 Volts AC (Receive); 70 Watts, .7 Amp. @ 117 Volts AC (Transmit) 6 Amp. @ 12.6 Volts DC (or) 12 Amp. @ 6.3 Volts DC
TUNING RANGE	Any 4 of Citizens Band Channels 1 thru 22

NOTICE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71).

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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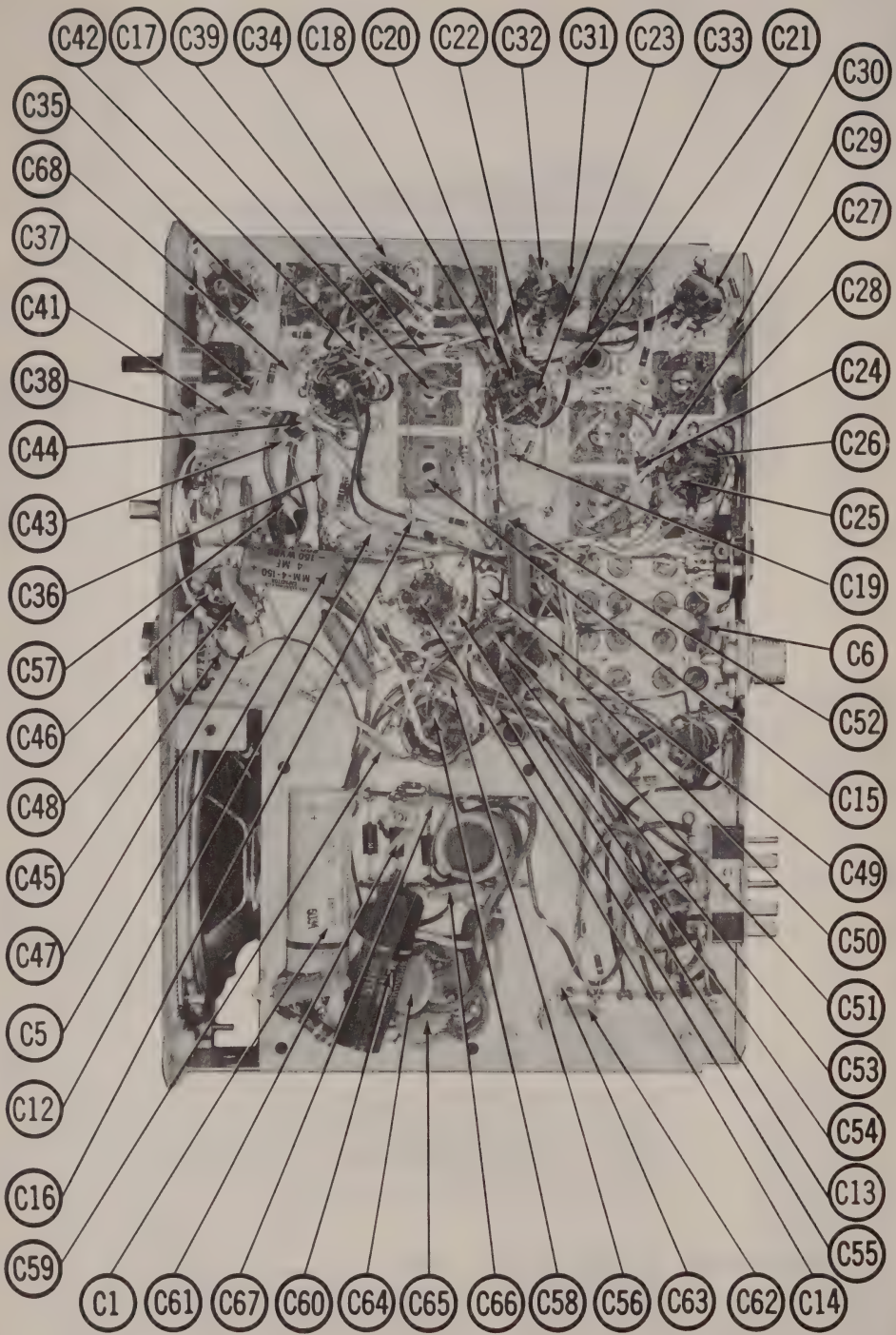
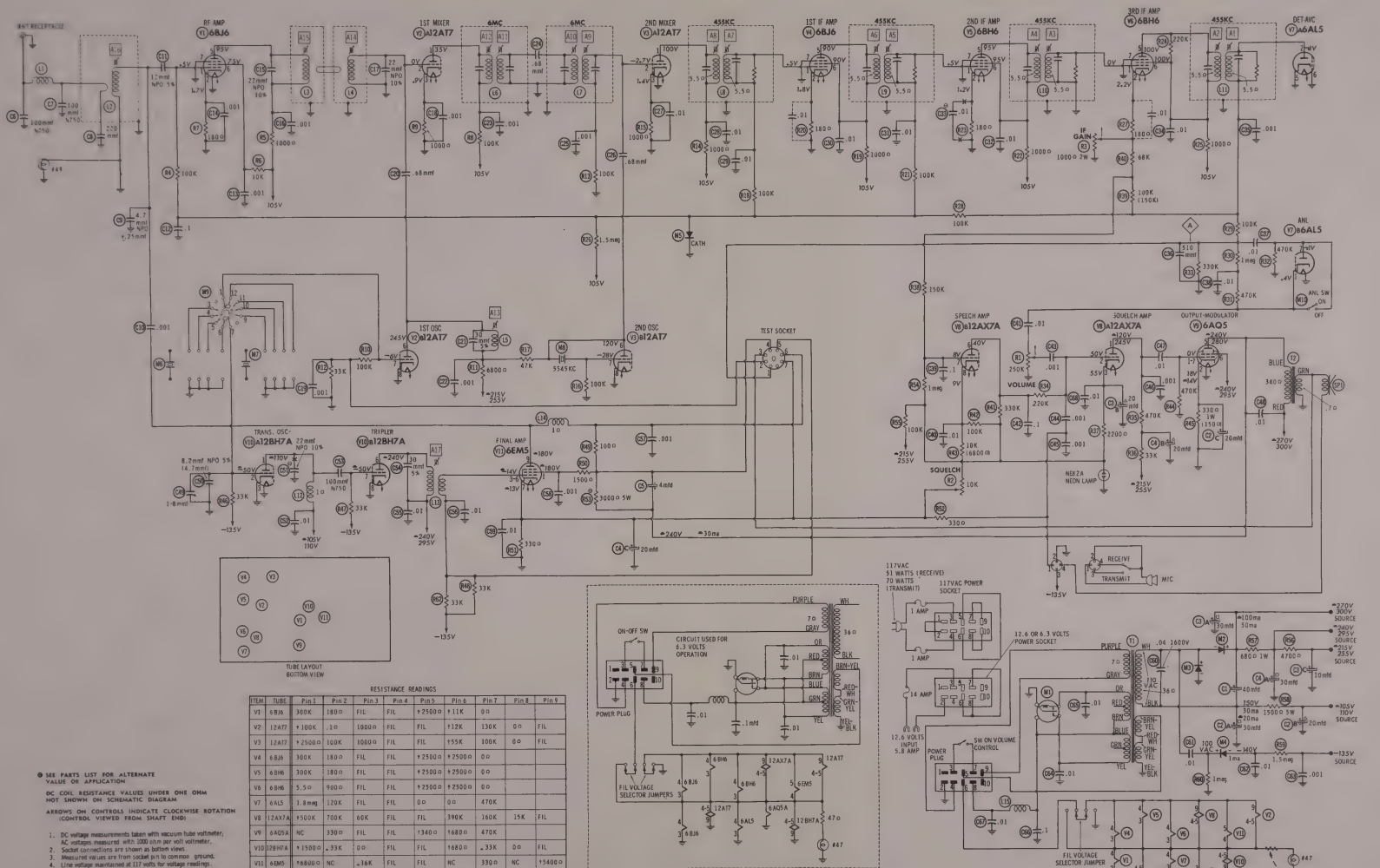


CHASSIS BOTTOM VIEW-CAPACITOR IDENT.



TUBE LAYOUT BOTTOM VIEW

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	6BJ6	300K	180Ω	FIL	FIL	↑2500Ω	↑11K	0Ω		
V2	12AT7	↑100K	.1Ω	1000Ω	FIL	FIL	↑12K	130K	0Ω	FIL
V3	12AT7	↑2500Ω	100K	1000Ω	FIL	FIL	↑55K	100K	0Ω	FIL
V4	6BJ6	300K	180Ω	FIL	FIL	↑2500Ω	↑2500Ω	0Ω		
V5	6BH6	300K	180Ω	FIL	FIL	↑2500Ω	↑2500Ω	0Ω		
V6	6BH6	5.5Ω	900Ω	FIL	FIL	↑2500Ω	↑2500Ω	0Ω		
V7	6AL5	1.8meg	120K	FIL	FIL	0Ω	0Ω	470K		
V8	12AX7A	↑500K	700K	60K	FIL	FIL	390K	160K	15K	FIL
V9	6AQ5A	NC	330Ω	FIL	FIL	↑340Ω	↑680Ω	470K		
V10	12BH7A	↑1500Ω	33K	0Ω	FIL	FIL	↑680Ω	33K	0Ω	FIL
V11	6EM5	↑680Ω	NC	16K	FIL	FIL	NC	330Ω	NC	↑540Ω

ALL MEASUREMENTS MADE IN "RECEIVE" POSITION WITH ANL ON WITH MICROPHONE UNLESS OTHERWISE DESIGNATED.
* MEASURED IN "TRANSMIT" POSITION.
↑ MEASURED FROM OUTPUT OF M2.
† MEASURED FROM JUNCTION OF C2A AND R58.
NC NO CONNECTION

● SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM.

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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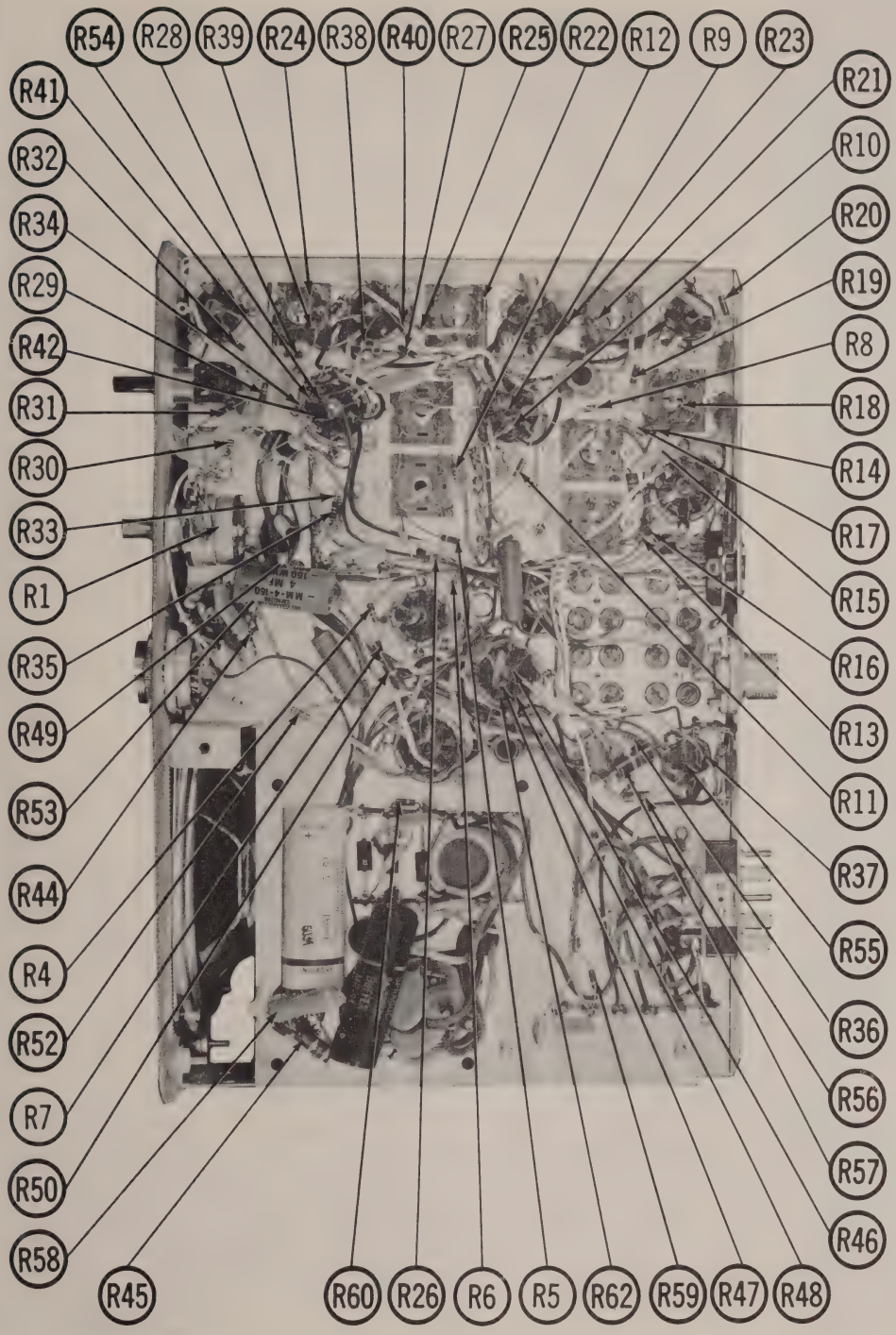


CHASSIS BOTTOM VIEW-RESISTOR IDENT.

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

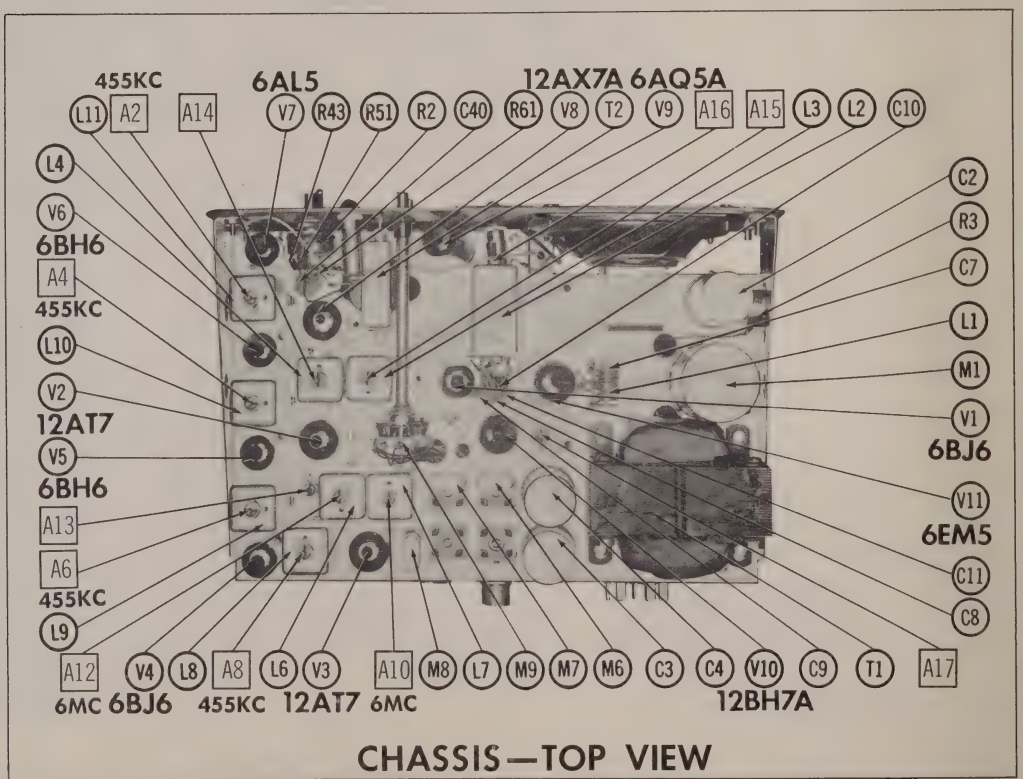
Use only enough generator output to provide a usable indication.
Suggested Alignment Tools: .... GENERAL CEMENT #8721, 8722
WALSCO #2519

RECEIVER ALIGNMENT

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .1mfd to pin 2 (grid) of 2nd Mixer. Low side to chassis.	455KC (Unmod.)		DC probe to point Ⓐ. Common to chassis.	A1, A2, A3, A4, A5, A6, A7, A8	Adjust for maximum deflection.
2.	High side thru .01mfd to pin 2 (grid) of 1st Mixer. Low side to chassis.	6.0MC		"	A9, A10, A11, A12	"
3.	"	Freq. of highest channel.		"	A13	Adjust for maximum deflection then detune 2 turns counterclockwise.
4.	High side thru .001mfd to pin 1 (grid) of RF Amp. Low side to chassis.	"		"	A14, A15	Adjust for maximum deflection.
5.	High side to antenna jack. Low side to chassis.	"		"	A16	"
6.	With the Squelch control fully counterclockwise, adjust the IF Gain control (R3) so that the receiver just breaks squelch with 5 microvolts signal applied to antenna jack.					

TRANSMITTER ALIGNMENT

Connect a dummy load, antenna or RF wattmeter to the antenna jack.
Select the center-most channel to be used.
Press the Transmitt button and adjust A17 for maximum output indication. Recheck A16 for peak.



CHASSIS—TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE (GENERAL ELECTRIC • RAYTHEON • SYLVANIA)
V1	RF Amplifier	6BJ6
V2	1st Mixer-Osc.	12AT7
V3	2nd Mixer-Osc.	12AT7
V4	1st IF Amplifier	6BJ6
V5	2nd IF Amplifier	6BH6
V6	3rd IF Amplifier	6BH6
V7	Det. -AVC-ANL	6AL5
V8	AF Amp. -Squelch Amp. - Speech Amp.	12AX7A
V9	Output-Modulator	6AQ5A
V10	Trans. Osc. -Tripler	12BH7A
V11	Final Amplifier	6EM5

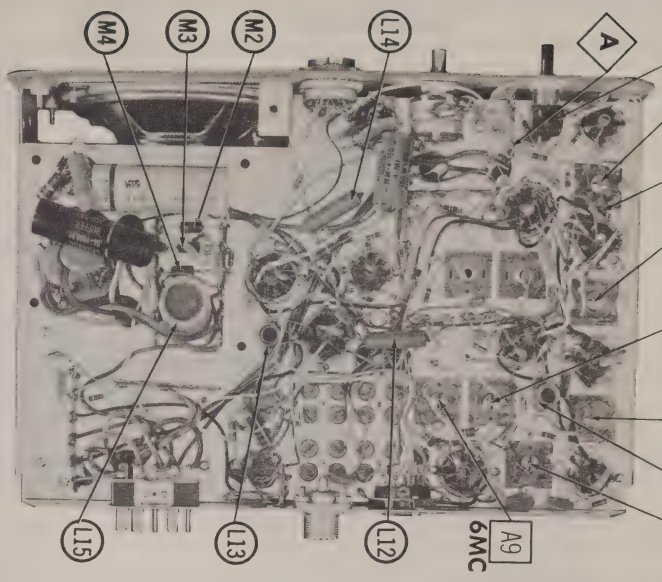
ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	Poly-Com PART No.	REPLACEMENT DATA: AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	40	250		PRS1580	BR4025	QT1-14	TC58	TD-40-250	TVA-1511
C2A	■30	350		AFH3-109	C0830	XC3-25	FP330	TMT-3361	TVL-3636
B	▲20	350							
C	20	25							
C3A	■30	350		AFH3-28-30	C0225	XC3-11	FP330.7	TMT-3426	TVL-3639.8
B	▲20	350							
C	10	350							
C4A	■30	350		AFH3-109	C0830	XC3-25	FP330	TMT-3361	TVL-3636
B	▲20	350							
C	20	25							
C5	4	150		PRS1400	BBR4-150	QT1-2	TT150X4	TD-4-150	TVA-1402

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA: AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C6	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C7	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C8	220		DI-220	DD-221	L10T22	CCD-221	B-322	10TS-T22
C9	4.7 NPO ± .25mmf		NPO-DI 4.7	DTZ-4R7	C10V47C	CCTO-4R7	CNO-547	10TCC-V47
C10	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C11	12 NPO 5%			TCZ-12	C10QI2C	CCTO-120	CNO-412	10TCC-Q12
C12	.1			DF-104	CUB2P1	ILP-2-104	BT-010	2TM-P10
C13	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C14	.001		BPL-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C15	22 NPO 10%		NPO-DI 22	DTZ-22	C10Q22C	CCTO-220	CNO-422	10TCC-Q22
C16	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C17	22 NPO 10%		NPO-DI 22	DTZ-22	C10Q22C	CCTO-220	CNO-422	10TCC-Q22
C18	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C19	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C20	.68mmf		NPO-SI .68	TCZ-R68				
C21	30 5%		1469-00003	TCZ-30	22R5Q3	CM-14B-300J		MS-43
C22	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C23	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C24	.68mmf		NPO-SI .68	TCZ-R68				
C25	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C26	.68mmf		NPO-SI .68	TCZ-R68				
C27	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C28	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C29	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C30	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C31	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C32	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C33	.01	Note 1	BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C34	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C35	.001		BPL-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C36	510		DI-500	DD-511	L10T5	CCD-501	B-350	10TS-T50
C37	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C38	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C39	.1			DF-104	CUB2P1	ILP-2-104	BT-010	2TM-P10
C40	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C41	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C42	.1			DF-104	CUB2P1	IDP-2-104	BT-010	2TM-P10
C43	.001		BPL-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C44	.001		BPL-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C45	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C46	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C47	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10

CHASSIS—BOTTOM VIEW



FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA: AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C48	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C49	1-8							
C50	8.2 NPO 5%	(4, 7) †	NPO-DI 8.2		C10V82C			10TCC-V82
C51	22 NPO 10%	Note 2	NPO-DI 22	DTZ-22	C10Q22C	CCTO-220	CNO-422	10TCC-Q22
C52	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C53	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C54	30 5%		1469-00003	TCZ-30	22R5Q3	CM-19B-300J		MS-43
C55	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C56	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C57	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C58	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C59	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C60	.04 1600V				CUBI6S4	16DP-5-403	GEM-1614	MB-S4
C61	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C62	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C63	.001		BPD-001	DD-102	BYA10DI	CCD-102	B-210	5HK-D10
C64	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C65	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C66	.1			DF-104	CUB2P1	IDP-2-104	BT-010	2TM-P10
C67	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10
C68	.01		BPD-01	DD-103	BYA10SI	CCD-103	B-110	5HK-S10

† Alternate Value.
Note 1. Not used in some versions.
Note 2. Not used in Models using 13MC Series Crystals.

PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	Poly-Com PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	250K	½		B-51	A47-250K-Z	Q13-130	U44	Volume
B	Shaft			Not Req.	RS-2	Not Req.	Not Req.	
C	Switch			KR-1	SWE-12	76-1	US-26	Power Off-On
R2A	10K	½		B-15	A47-10K-Z	Q13-116	U18	Squelch
B	Shaft			Not Req.	RS-2	Not Req.	Not Req.	
R3	1000Ω	2(WW)			39-1000	112-1000	FL-1K	IF Gain

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R4	100K				R34	220K			
R5	1000Ω				R35	470K			
R6	10K				R36	33K			
R7	180Ω				R37	2200Ω			
R8	100K				R38	150K			
R9	1000Ω				R39	100K			(150K) *
R10	100K				R40	68K			
R11	6800Ω				R41	330K			
R12	33K				R42	100K			
R13	100K				R43	10K			(6800Ω) *
R14	1000Ω				R44	470K			
R15	1000Ω				R45	330Ω 1W			(150Ω) *
R16	100K				R46	33K			
R17	47K				R47	33K			
R18	100K				R48	33K			
R19	1000Ω				R49	100Ω			
R20	180Ω				R50	1500Ω			
R21	100K				R51	330Ω			
R22	1000Ω				R52	330Ω			
R23	180Ω				R53	3000Ω 5W	PW5-3000	5W-SQ-3000	Note 1
R24	220K				R54	1meg			
R25	1000Ω				R55	100K			
R26	1.5meg				R56	4700Ω			
R27	180Ω				R57	680Ω 1W			
R28	100K				R58	1500Ω 5W	PW5-1500	5W-SQ-1500	
R29	100K				R59	1.5meg			
R30	1meg				R60	1meg			
R31	470K				R61	47Ω			
R32	470K				R62	33K			
R33	330K								

Note 1. Value may vary. Selected for 4.9W input power to final amp.
* Alternate Value

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		Poly-Com PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	Ant. Loading(5uh)						
L2	Ant.						
L3	RF						
L4	Mixer Grid						
L5	Osc. Plate						
L6	1st 6MC IF						
L7	2nd 6MC IF						
L8	1st 455KC IF		BC-352	12-C1	RTC-8632	T616	
L9	2nd 455KC IF		BC-352	12-C1	RTC-8632	T616	
L10	3rd 455KC IF		BC-352	12-C1	RTC-8632	T616	
L11	4th 455KC IF		BC-352	12-C1	RTC-8632	T616	
L12	RF Choke (10uh)		BC-566	4612	RTC-8522	T860	
L13	Tripler Plate		TV-116	6250	RTC-8586	T232A	
L14	RF Choke (10uh)		BC-566	4612	RTC-8522	T860	
L15	Hash Choke (12uh)		BC-537	5220	RTC-9182		

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	SEC. 2	Poly-Com PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	117V@ .7A or 12VDC@ 5.8A	110V@ .420A AC	6.3V@ 4.8A	P128C					
	SEC. 3	SEC. 4	SEC. 5						
	6.3V@ 4.8A								

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	Poly-Com PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	14K	3-4Ω	715W1A					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	Poly-Com PART No.	QUAM PART No.	
SP1	4"	PM	3-4Ω	P4-WA *	4A10T *	*Weather-proof Speaker

VIBRATOR

ITEM No.	TYPE	INPUT VOLTS	FRE-QUENCY	REPLACEMENT DATA				NOTES
				Poly Com PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	RADIART PART No.	
M1	Interrupter	12.6V	115∿			1609		12 Volt Versions
	Interrupter	6.3V	115∿					6 Volt Versions

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT (Measured)	Poly-Com PART No.	RCA PART No.	SARKES TARZIAN PART No.	
M2	.100A	F6 *	1N1763	F6	* Some versions may use 60E5
M3	.100A	F6 *	1N1763	F6	♦ Some versions may use 40E5
M4	.001A	K200 ♦	1N1763	2F4	

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		Poly-Com PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M5	HD6226				

MISCELLANEOUS

ITEM No.	PART NAME	Poly-Com PART No.	NOTES
M6	Crystal		Transmit (Order by freq. & Channel Desired)
M7	Crystal		Receive (Order by freq. & Channel Desired)
M8	Crystal		5545KC
M9	Switch		Channel Selector (Rotary Type)
M10	Switch		ANL Off-On (Toggle Types)

WIRING DATA

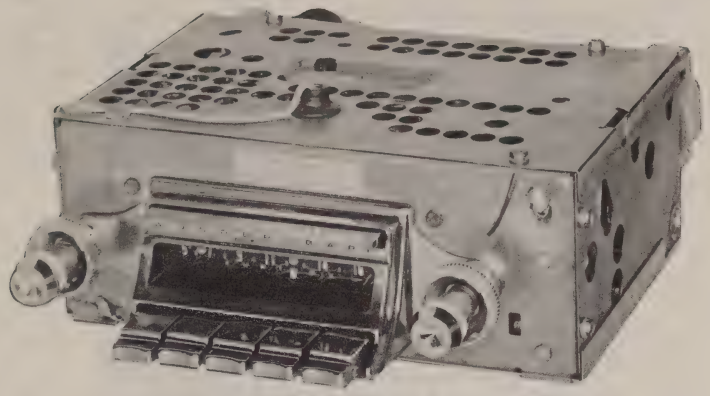
General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

Power Cord ..... Use BELDEN No. 1765-B (6 Ft. Length)
1725-K (7½ Ft. Length)

PHOTOFACT® Folder with CIRCUITRACE®

PONTIAC MODELS
989692

PONTIAC MODELS
989692



TRADE NAME	Pontiac Model 989692 (For 1961 Pontiacs)
MANUFACTURER	Delco Radio Div., General Motors Corp., Kokomo, Indiana
TYPE SET	Battery Operated 5 Tube — 1 Transistor Custom Built Automobile AM Receiver
POWER SUPPLY	12 Volt Storage Battery RATING 2.6 Amp. @ 12.6 Volts DC
TUNING RANGE—BROADCAST	540 — 1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1 thru A5, A9, A10..... GENERAL CEMENT #8282, 8606, 8606-L, 9091
WALSCO #2526, 2541, 2542, 2543, 2544
A6, A7, A8..... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
1.	High side thru .1mfd to pin 7 (grid) of Converter. Low side to chassis.	262KC (400% Mod.)	High end stop.	DC probe to point (A). Common to chassis.	A1, A2, A3	Adjust for maximum deflection.
2.	"	"	"	"	A4	Adjust for MINIMUM deflection.
	Check setting of Oscillator Core (A5). Rear of core should be 1 5/8" from mounting end of coil form.					
3.	High side thru 82mmf to Antenna receptacle. Low side to chassis.	1615KC	"	"	A6, A7, A8	Adjust for maximum deflection.
4.	"	600KC	600KC Signal.	"	A9, A10	"
5.	"	1615KC	1615KC Signal.	"	A7, A8	"
6.	"	1100KC	1100KC Signal.	"		Adjust pointer adjustment until pointer coincides with 1100 on dial.
7.	With radio installed in car and antenna fully extended, tune in a weak station near 1000KC and adjust A8 for maximum output.					

PUSHBUTTON ADJUSTMENT

1. Tune manually to desired station.
2. Pull pushbutton out, then press in firmly.
3. Repeat for remaining pushbuttons.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KD931

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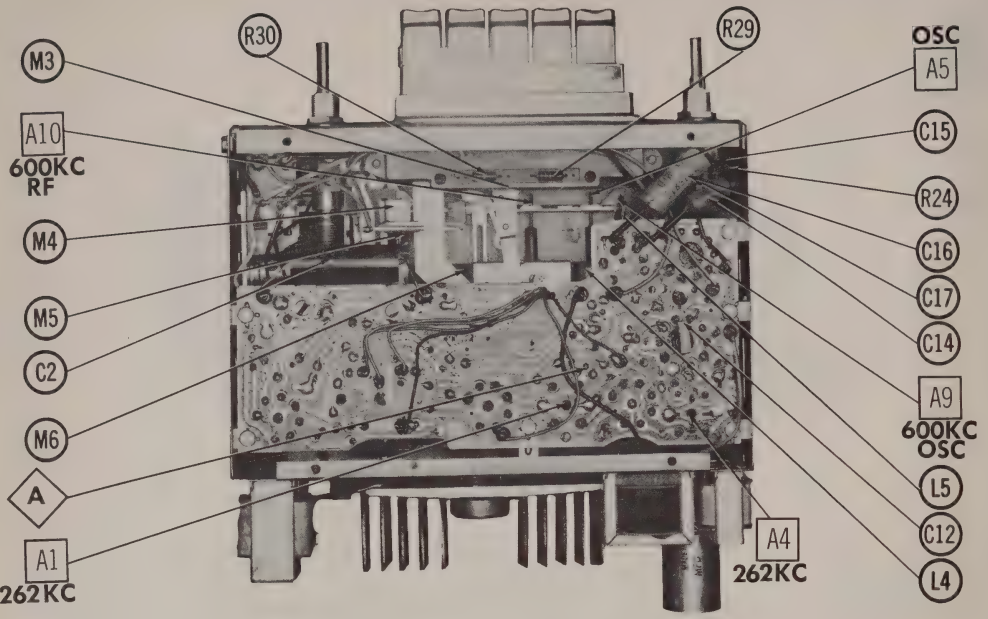
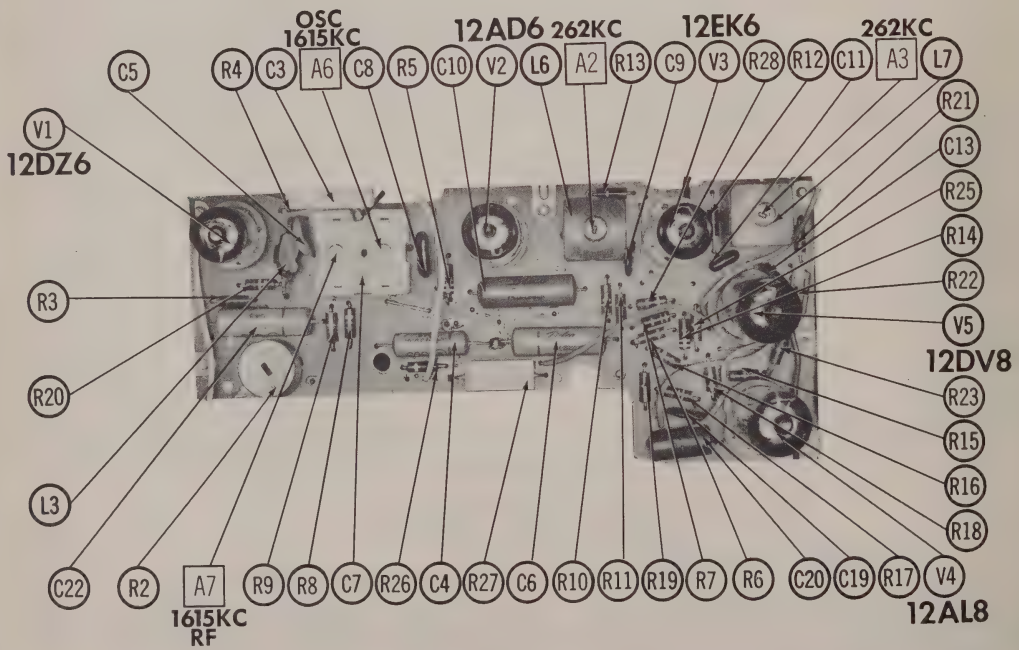
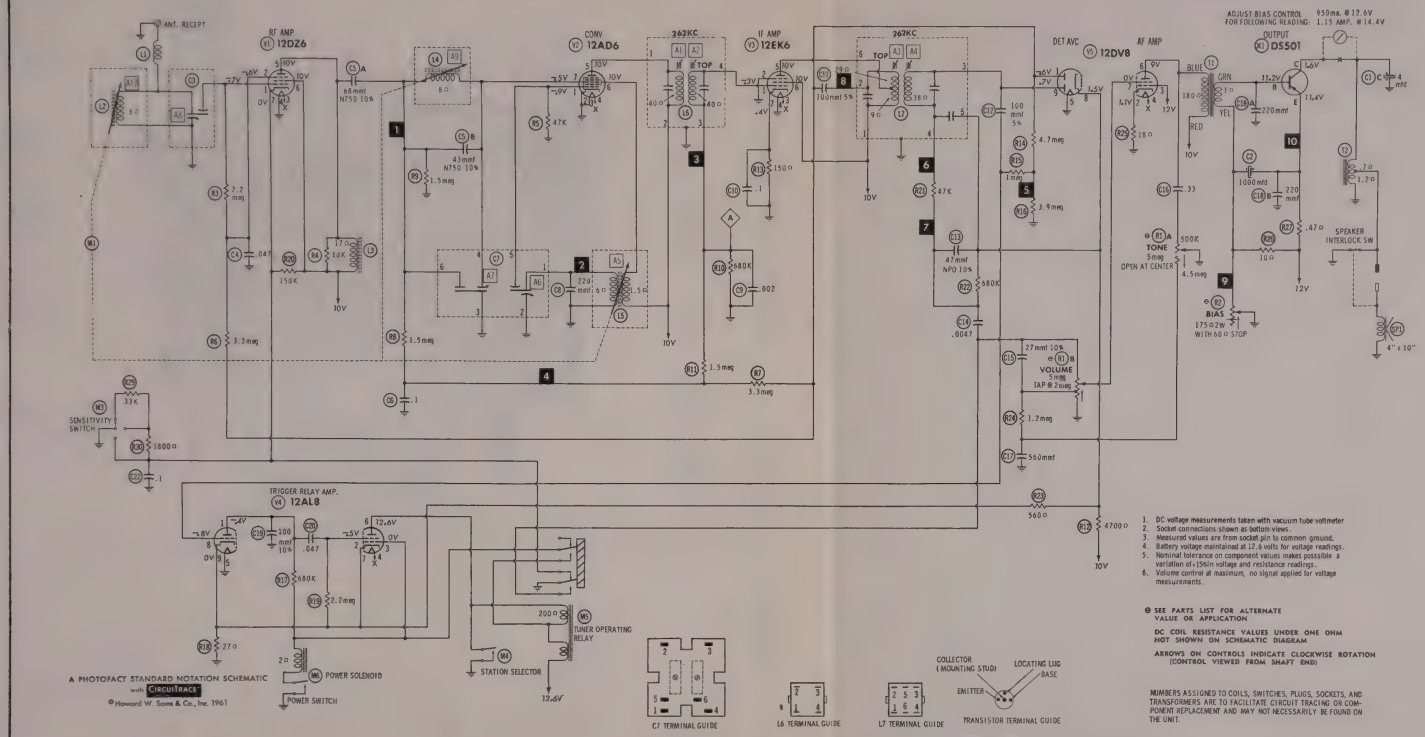
SET 554 FOLDER 9



CHASSIS BOTTOM VIEW



PRINTED BOARD



1. DC voltage measurements taken with vacuum tube voltmeter
2. Socket connections shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Battery voltage maintained at 12.6 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE®

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C7 TERMINAL GUIDE

L6 TERMINAL GUIDE

L7 TERMINAL GUIDE

TRANSISTOR TERMINAL GUIDE

RESISTANCE READINGS

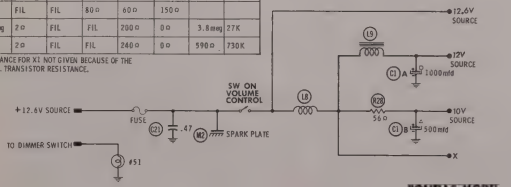
ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12DZ6	8 meg	6 meg	FIL	FIL	75Ω	60Ω	0Ω		
V2	12AD6	47K	0Ω	FIL	FIL	100Ω	60Ω	1.2 meg		
V3	12EK6	500K	0Ω	FIL	FIL	80Ω	60Ω	150Ω		
V4	12AL8	680K	2.2 meg	2Ω	FIL	FIL	200Ω	0Ω	3.8 meg	27K
V5	12DV8	3 meg	18Ω	2Ω	FIL	FIL	240Ω	0Ω	590Ω	730K

TRANSISTOR CIRCUIT RESISTANCE FOR X1 NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

A Howard W. Sams CIRCUITRACE® Photo

PRINTED BOARD

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



PONTIAC MODEL 930692

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE (◆ GENERAL ELECTRIC ◆ RAYTHEON ◆ SYLVANIA ◆)
V1	RF Amplifier	12DZ6
V2	Converter	12AD6
V3	IF Amplifier	12EK6
V4	Trigger Relay Amp.	12AL8
V5	Det. -AVC-AF Amp.	12DV8

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	DS501	Output	2N176		PNP Note 1

Note 1. When replacing, apply silicone grease between transistor and heat sink. Tighten mounting screws securely. Check bias adjustment.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	DELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	■1000	16	7273810	AFH3-54-41			WP300.9		TVLS-3021.5*
B	▲500	16							
C	4	11.5AC							
C2	1000	1	7271557	PRS1130	BR1000-6	QT1-32	PETA120	TD-1000-6	TVA-1104

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C3		#7274175						
C4	.047 75V		P288N-047	DD-503	CUB2S47	1DP-2-473	GEM-4147	2TM-S47
C5A	68 10%		N750-DI 68	TCN-68	C10Q68U	CCTN-680	CN7-468	10TCU-Q68
B	43 N750 10%		N750-DI 43	TCN-43	C10Q43U	CCTN-390	CN7-439	10TCU-Q39
C6	.1 75V		P288N-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2TM-P10
C7		#7273693						
C8	220 5%		1469-00022	TCZ-220	22R5T22	CM-19B-221J	CNO-322	MS-322
C9	.002		BPL-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C10	.1 75V		P288N-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2TM-P10
C11	100 5%		1469-0001	TCZ-100	22R5T1	CM-19B-101J	MCE235	MS-31
C12	100 5%		1469-0001	TCZ-100	22R5T1	CM-19B-101J	MCE235	MS-31
C13	47 NPO 10%		NPO-DI 47	DTZ-47	C10Q47C	CCTO-470	CNO-447	10TCC-Q47
C14	.0047 200V		P288N-0047	D6-472	CUB6D47	6DP-1-472	GEM-6247	6TM-D47
C15	27 10%		DI-27	DD-270	L10Q27	CCD-270	GP427	10TS-Q27
C16	.33 100V		P288N-33		DPMS4P33	1DP-4-334	GEM-2033	2PS-P33
C17	560		DI-560	DD-561	L10T56	CCD-561	B-356	10TS-T56

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C18A	220		DI-220	DD-221	L10T22	CCD-221	B-322	10TS-T22
B	220		DI-220	DD-221	L10T22	CCD-221	B-322	10TS-T22
C19	100 10%		DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10
C20	.047 100V		P288N-047	DD-503	CUB2S47	1DP-2-473	GEM-4147	2TM-S47
C21	.47 100V		P288N-47		CUB2P47	1DP-4-474	GEM-2047	2TM-P47
C22	.1 100V		P288N-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2TM-P10

Delco Part Number.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	DELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	5meg*	1/2	7277542					Tone
B	5meg 2meg Tap	1/2				† QJ-1391A	■ UE4246-S	Volume
C	Switch							Power Off-On
R2	175Ω 60Ω Stop	2(WW)	1221422 ①					Bias

* Open at Center of Rotation. Low end 50K, High end 5meg. ① Temperature Compensated.

■ "STA-LOC" Equivalent: FN56X, RU56T26, OS937A, IS1825, US41.

† "CONCENTRIKIT" Equivalent: K-8 Kit with Base Elements and Shafts:
B12-341, P17-031 (Panel)
B18-141X, R9-115 (Rear)
S40 (Bushing)
76-1 (Switch)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R3	2.2meg				R17	680K			
R4	10K				R18	27Ω			
R5	47K				R19	2.2meg			
R6	3.3meg				R20	150K			
R7	3.3meg				R21	47K			
R8	1.5meg				R22	680K			
R9	1.5meg				R23	560Ω			
R10	680K				R24	1.2meg			
R11	1.5meg				R25	18Ω			
R12	4700Ω				R26	10Ω			
R13	150Ω				R27	.47Ω			Pt. #7270608
R14	4.7meg				R28	56Ω			
R15	1meg				R29	33K			
R16	3.9meg				R30	1800Ω			

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		DELCO PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	RF Choke(6.5uh)	7255738	BC-565	4610	RTC-8520	T858	
L2	Ant.	1221138					
L3	RF Choke(1.8MH)	7269684	BC-514	4664	RTC-8533	T875	
L4	RF	1221138					
L5	Osc.	1221151					
L6	Input IF	1221257	BC-344	13-PH1	RTC-8644	T655	
L7	Output IF	1221253	BC-424				
L8	Hash Choke (1.4uh)	7241708					

FILTER CHOKE

ITEM No.	RATINGS			REPLACEMENT DATA					NOTES
	CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ~)	DELCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
L9	1A	.7Ω	.011HY	7274342		TC-2			

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	DELCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	6.8	1	1221590		TA-48			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
	PRI.	DELCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	10Ω Tap @ 3-4Ω	1221428		TA-50			

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	DELCO PART No.	QUAM PART No.	
SP1	4"x 10"	PM	3-4Ω	7276482	410A2	

MISCELLANEOUS

ITEM No.	PART NAME	DELCO PART No.	NOTES
M1	Tuner		Pushbutton, Signal Seeking, Series F3
M2	Spark Plate	7271564	
M3	Switch	7277537	Sensitivity (Includes Push Bar)
M4	Switch	1221408	Includes Push Bar & Solenoid
M5	Relay	7270545	Tuner Operating
M6	Solenoid & Plunger Ass'y.	1221409	

CABINETS & CABINET PARTS

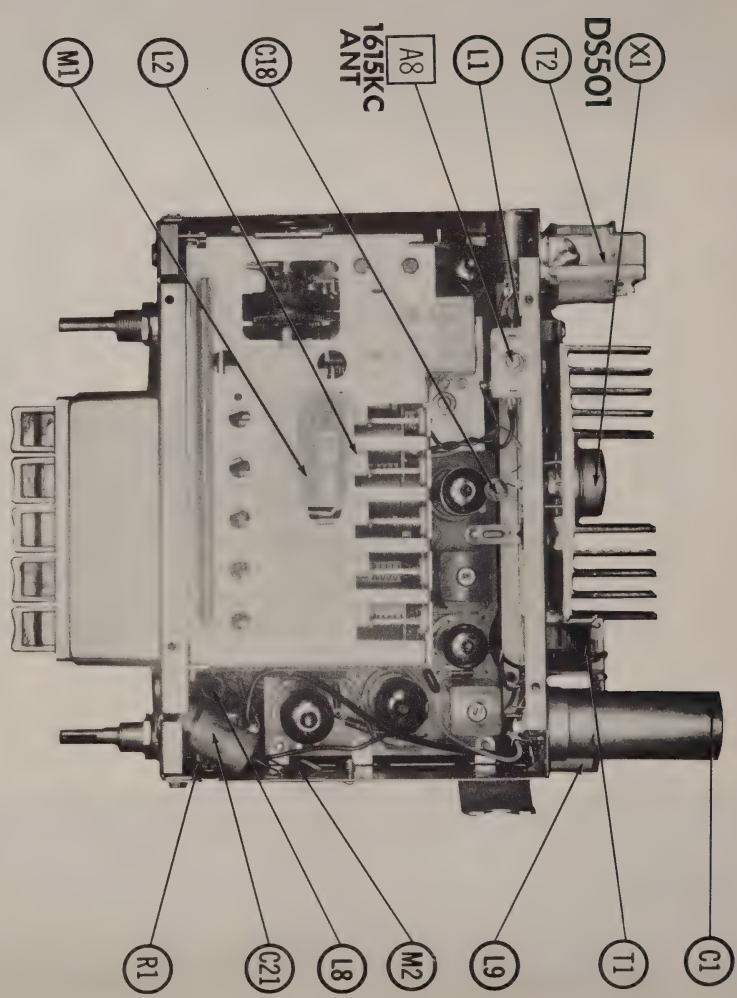
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Dial Pointer	1221513	
Pushbutton	7273345	
Knob	535908	Tuning, Volume
Knob	538621	Tone
Knob	538718	Dummy

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Shielded Hook-up Wire	Use BELDEN No. 8885
Bonding Strap	Use BELDEN No. 8661

CHASSIS—TOP VIEW



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RCA VICTOR CHASSIS RC-1202A, B, C, E

RCA VICTOR CHASSIS
RC-1202A, B, C, E

MODEL 1X2E

TRADE NAME	RCA Victor Models 1C1E, 1C2EM, 1C2FE, 1C2JE (Ch. RC-1202E) 1X1E, 1X1F, 1X1H, 1X1K (Ch. RC-1202A) 1X2E, 1X2FE, 1X2JE, 1X2LE (Ch. RC-1202A) 1X3E, 1X3EH, 1X3FE, 1X3KE (Ch. RC-1202B) 1X4E, 1X4EJ, 1X4HE, 1X4JM (Ch. RC-1202C)
MANUFACTURER	RCA Victor Radio & "Victrola" Div., Radio Corp. of America, Camden 8, N. J.
TYPE SET	AC Operated 5 Tube AM Receiver (Model 1C Series Include Electric Clock)
POWER SUPPLY	110 — 120 Volts AC, 60 Cycles RATING 19 Watts, .2 Amp. @ 117 Volts AC
TUNING RANGE—BROADCAST	540 — 1600KC

ALIGNMENT INSTRUCTIONS

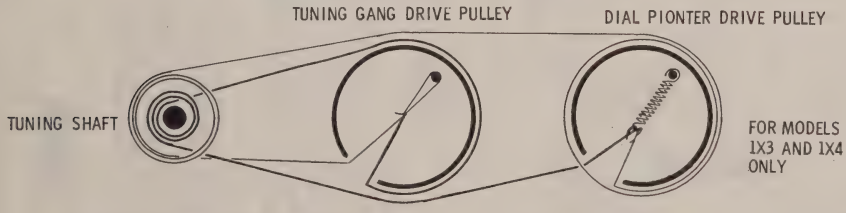
ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1, A2, A3.. GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
WALSCO #2515, 2531, 2532
A4, A5..... GENERAL CEMENT #5004, 5008, 5009
WALSCO #2520
A6..... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .01mfd to Antenna stator lug of tuning gang. Low side to B-.	455KC (400~ Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
2.	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.	1620KC	"	"	A4	"
3.	"	1400KC	1400KC Signal.	"	A5	"
4.	"	600KC	600KC Signal.	"	A6	Adjust for maximum output while rocking tuning gang. Repeat Steps 2, 3 and 4.

DRIVE CORD STRINGING



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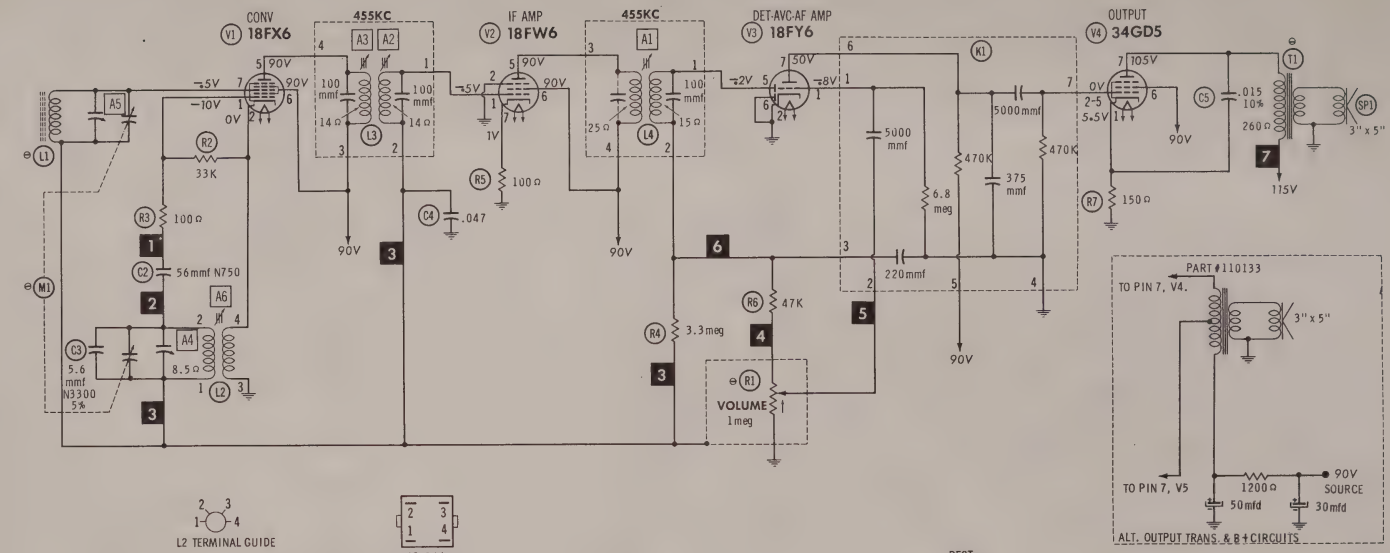
SET 554 FOLDER 10



Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	18FX6	33K	.1Ω	15Ω	30Ω	†1200Ω	†1200Ω	4.3meg
V2	18FW6	4.3meg	0Ω	30Ω	45Ω	†1200Ω	†1200Ω	100Ω
V3	18FY6	6.8meg	0Ω	0Ω	15Ω	1meg	0Ω	†470K
V4	34GD5	150Ω	470K	45Ω	85Ω	NC	†1200Ω	†260Ω
V5	36AM3	TP	TP	85Ω	125Ω	125Ω	120Ω	¶

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
† MEASURED FROM PIN 7 OF V5. NC NO CONNECTION TP TIE POINT

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RCA VICTOR CHASSIS RC-1202A, B, C, E

PARTS LIST AND DESCRIPTIONS

TUBES

• GENERAL ELECTRIC • RAYTHEON • SYLVANIA •

ITEM No.	USE	TYPE
V1	Converter	18FX6
V2	IF Amplifier	18FW6
V3	Det.-AVC-AF Amp.	18FY6
V4	Output	34GD5
V5	Rectifier	36AM3

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA RCA Victor PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	50	150	110060 ①	PR2-030	BBRD5315	QT2-7	PWD211	TDLD-8	TVA-2450
B	30	150							

① Chassis RC-1202C uses 70-30mfd in this application (Part #110121).

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C2	56 N750			TCN-56	C10Q56U	CCTN-560	CN7-456	10TCU-Q56
C3	5.6 N3300 5%	#103440				*		
C4	.047 400V		P488N-047	DD-503	CUB4S47	4DP-3-503	GEM-4147	4TM-S47
C5	.015 400V 10%		V84C4S15-10%		PM4S15	4DP-1-153		4TM-S15
C6	.047 400V	Note 1	P488N-047	DD-503	CUB4S47	4DP-3-503	GEM-4147	4TM-S47

RCA Victor Part Number.
Note. 1. Not used in Chassis RC-1202C
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA RCA Victor PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1meg	½	110056 ①					Volume
B	Switch							Power Off-On

① Chassis RC-1202B, RC-1202C use Part #110129. Chassis RC-1202E uses Part #110174.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R2	33K			
R3	100Ω			
R4	3.3meg			
R5	100Ω			

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R6	47K			
R7	150Ω			
R8	1200Ω 1W			

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	RCA Victor PART No.	REPLACEMENT DATA
K1	Audio Coupling	220mmf, 375mmf, 005mfd, 005mfd, 470K, 470K, 6.8meg	106989	Centralab PC379

PRINTED BOARD

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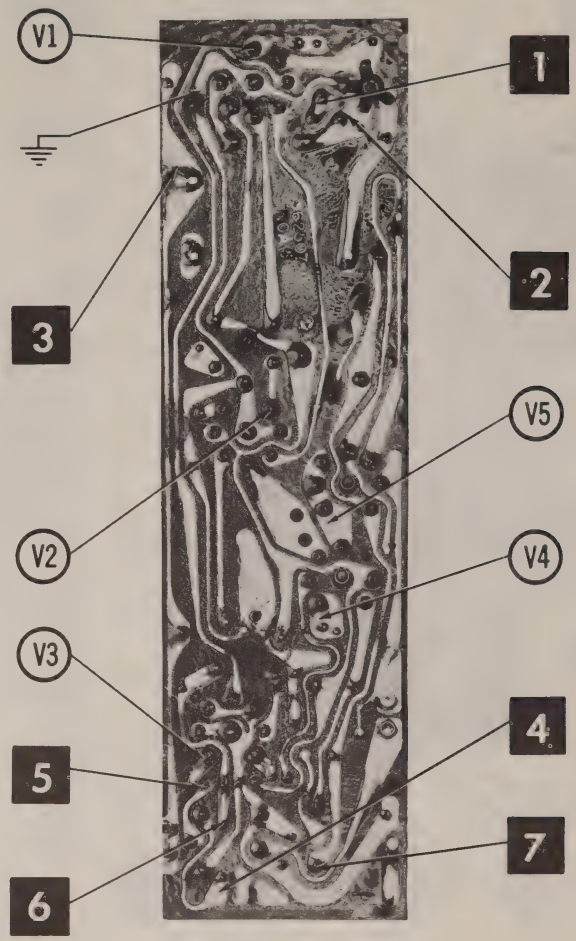
ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		RCA Victor PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	Loopstick	110063 ①	BC-419	705-A		T532	① Model 1X2 Series. Part #110127 used in Model 1X3 Series. Part #110132 used in Model 1X4 Series. Part #110164 used in Model 1C Series.
L2	Osc.	110059					
L3	Input IF	110057	BC-356	13-PC1	RTC-8641	T614	
L4	Output IF	108008	BC-357	13-PC2	RTC-8642	T615	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	RCA Victor PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	3100Ω	3-4Ω	110058 ①					① Part #110133 used in Chassis RC1202B, C, E

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	RCA Victor PART No.	QUAM PART No.	
SP1	3"x 5"	PM	3-4Ω	110068	35A05	

MISCELLANEOUS

ITEM No.	PART NAME	RCA Victor PART No.	NOTES
M1	Tuning Cap.	110055	2 Gang, Chassis RC-1202A
	Tuning Cap.	110028	2 Gang, Chassis RC-1202B
	Tuning Cap.	110024	2 Gang, Chassis RC-1202C
	Printed Board	110054	Includes All Components Except Tuning Gang, Volume Control, Output Transformer, Electrolytic Cap & Tubes

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	110157	Volume, Model 1C Series
Knob	110066	Volume, Model 1X Series
Knob	110157	Tuning, Model 1C Series
Knob	110065	Tuning, Models 1X1 Series, 1X2 Series
Knob	110130	Tuning, Models 1X3 Series, 1X4 Series
Knob	110156	Clock Function, Model 1C Series
Knob	110175	Clock Time Set, Model 1C Series
Dial	110064	Tuning, Models 1X1 Series, 1X2 Series
Dial	110125	Tuning, Model 1X3 Series
Dial	110123	Tuning, Model 1X4 Series
Pointer	110131	Dial, Models 1X3 Series, 1X4 Series
Window	110158	Clock, Models 1C Series
Hands	110160	Clock, Model 1C Series (Includes 1 hour, minute, second and alarm hand)

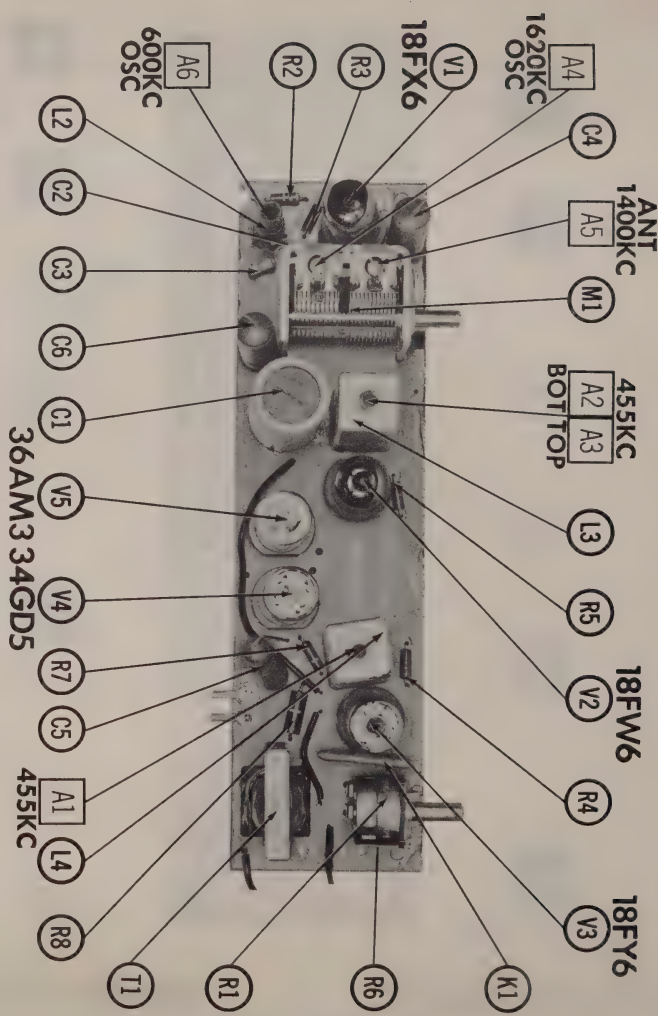
CABINETS

MODEL	PART NO.	MODEL	PART NO.	MODEL	PART NO.	MODEL	PART NO.
1C1E	Y7141	1X1F	Y7151	1X2JE	Y7123	1X3KE	Y7132
1C2EM	Y7144	1X1H	Y7152	1X2LE	Y7124	1X4E	Y7130
1C2FE	Y7143	1X1K	Y7153	1X3E	Y7134	1X4EJ	Y7128
1C2JE	Y7142	1X2E	Y7126	1X3EH	Y7133	1X4HE	Y7129
1X1E	Y7150	1X2FE	Y7125	1X3FE	Y7135	1X4JM	Y7131

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type)	Use BELDEN No. 8874

CHASSIS—TOP VIEW



TRADE NAME	Sharp Model BX-326
IMPORTER	Toyomenka, Inc., 2 Broadway, New York 4, N. Y.
TYPE SET	Battery Operated Transistorized Portable BC-SW Receiver
POWER SUPPLY	6 Volts DC RATING 10MA @ 6 Volts DC (No Signal, Min. Volume) 20MA @ 6 Volts DC (Signal, Normal Volume)
TUNING RANGE—BROADCAST	540—1600KC SHORT WAVE 3.9—12MC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1, A2, A3, A6..... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538

A5, A8, A9, A11, A14, A15..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089
WALSCO #2512, 2525, 2528

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .05mfd to Base of Converter. Low side to chassis.	455KC (400% Mod.)	(BC) Tuning gang fully open.	Across voice coil.	A1, A2, A3	Aqjust for maximum output.
2.	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.	540KC	Tuning gang fully closed	"	A4	"
3.	"	1640KC	Tuning gang fully open.	"	A5	"
4.	"	600KC	600KC Signal.	"	A6, A7	"
5.	"	1400KC	1400KC Signal.	"	A8, A9	Adjust for maximum output. Repeat Steps 2 thru 5.
6.	"	3.8MC	(SW) Tuning gang fully closed.	"	A10	Adjust for maximum output.
7.	"	12.2MC	Tuning gang fully open.	"	A11	"
8.	"	4.5MC	4.5MC Signal.	"	A12, A13	"
9.	"	10MC	10MC Signal.	"	A14, A15	Adjust for maximum output. Repeat Steps 6 thru 9.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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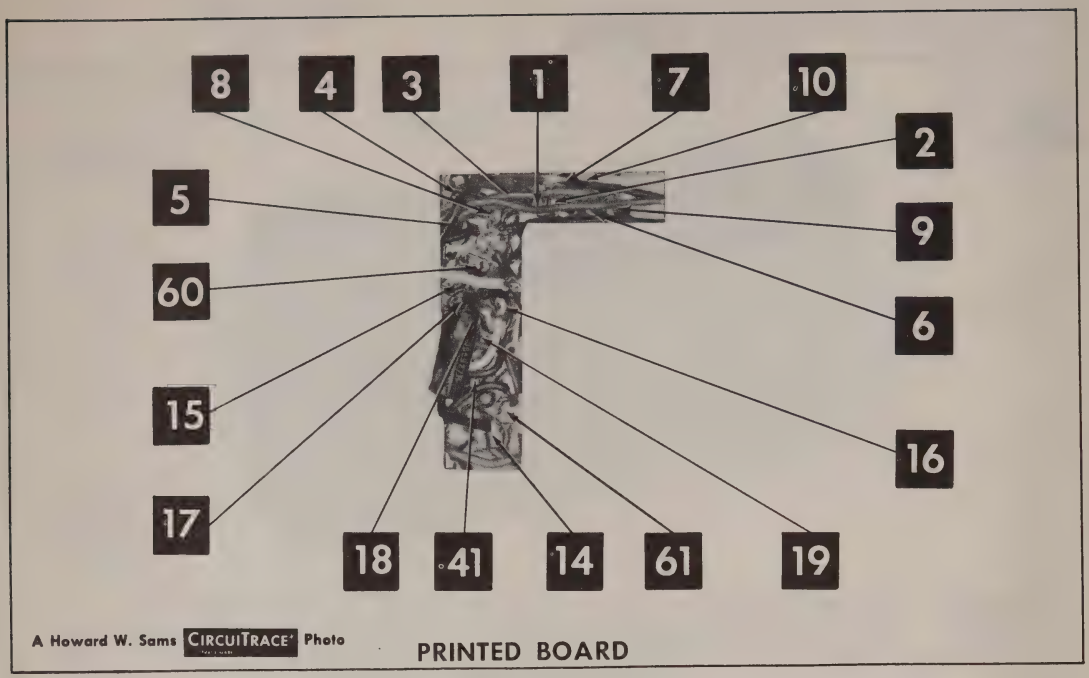
SHARP MODEL
BX-326

SHARP MODEL
BX-326

SET 554 FOLDER 11



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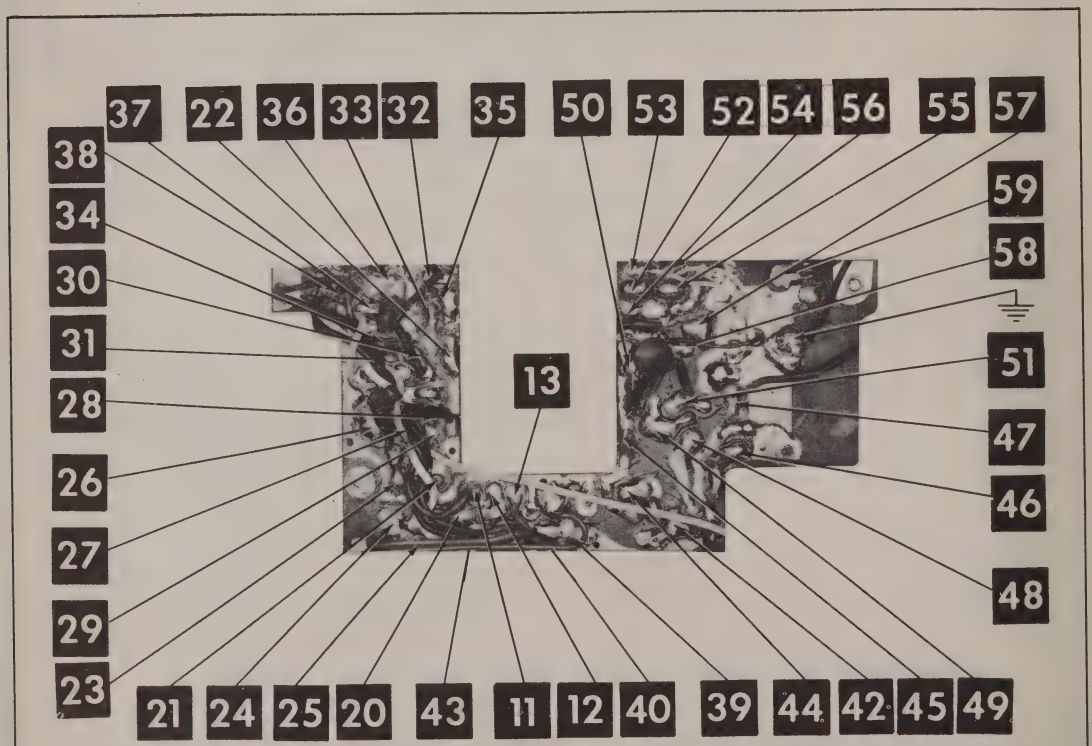

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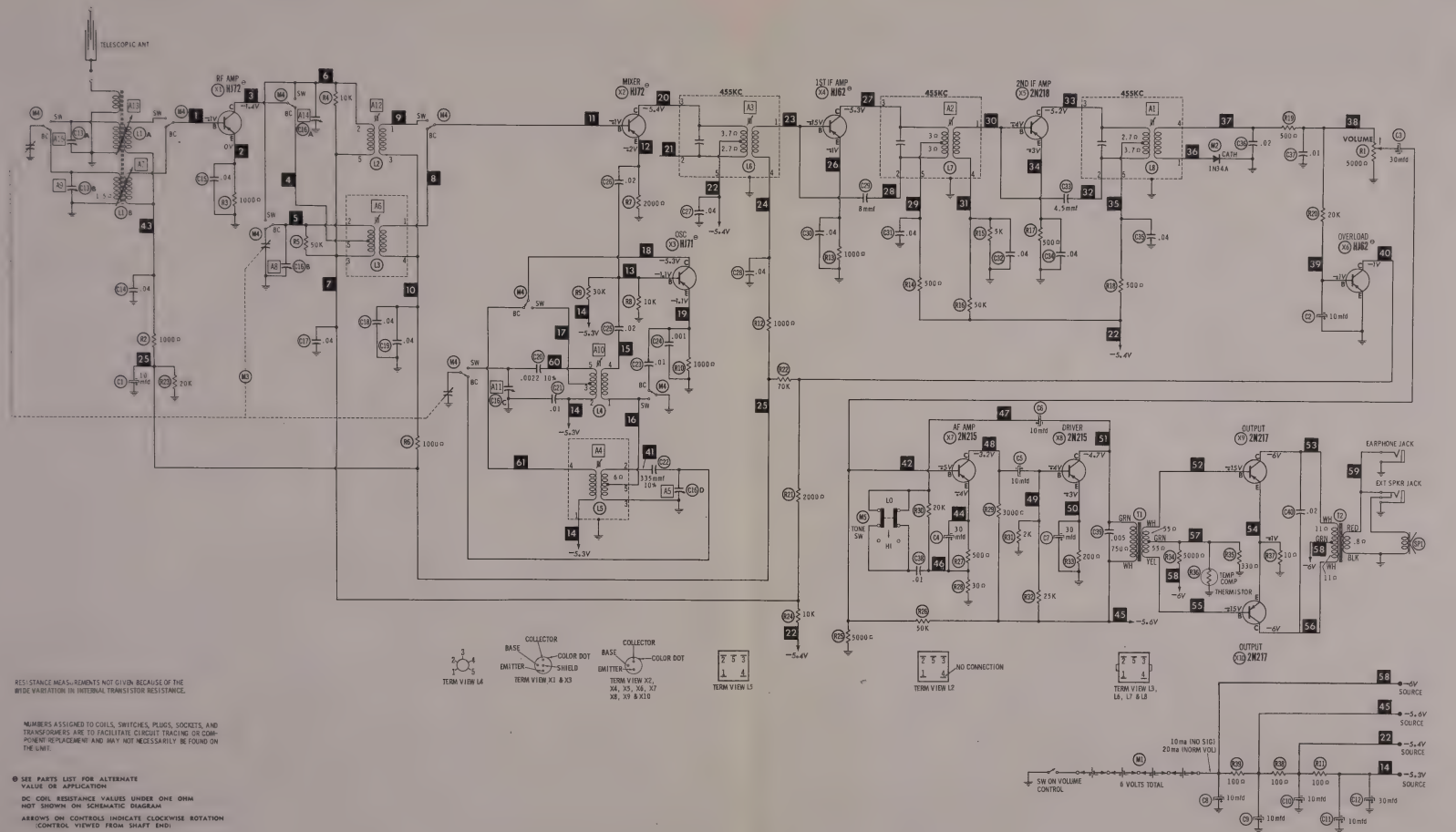

RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

⊙ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as [illegible] view.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of ±5% in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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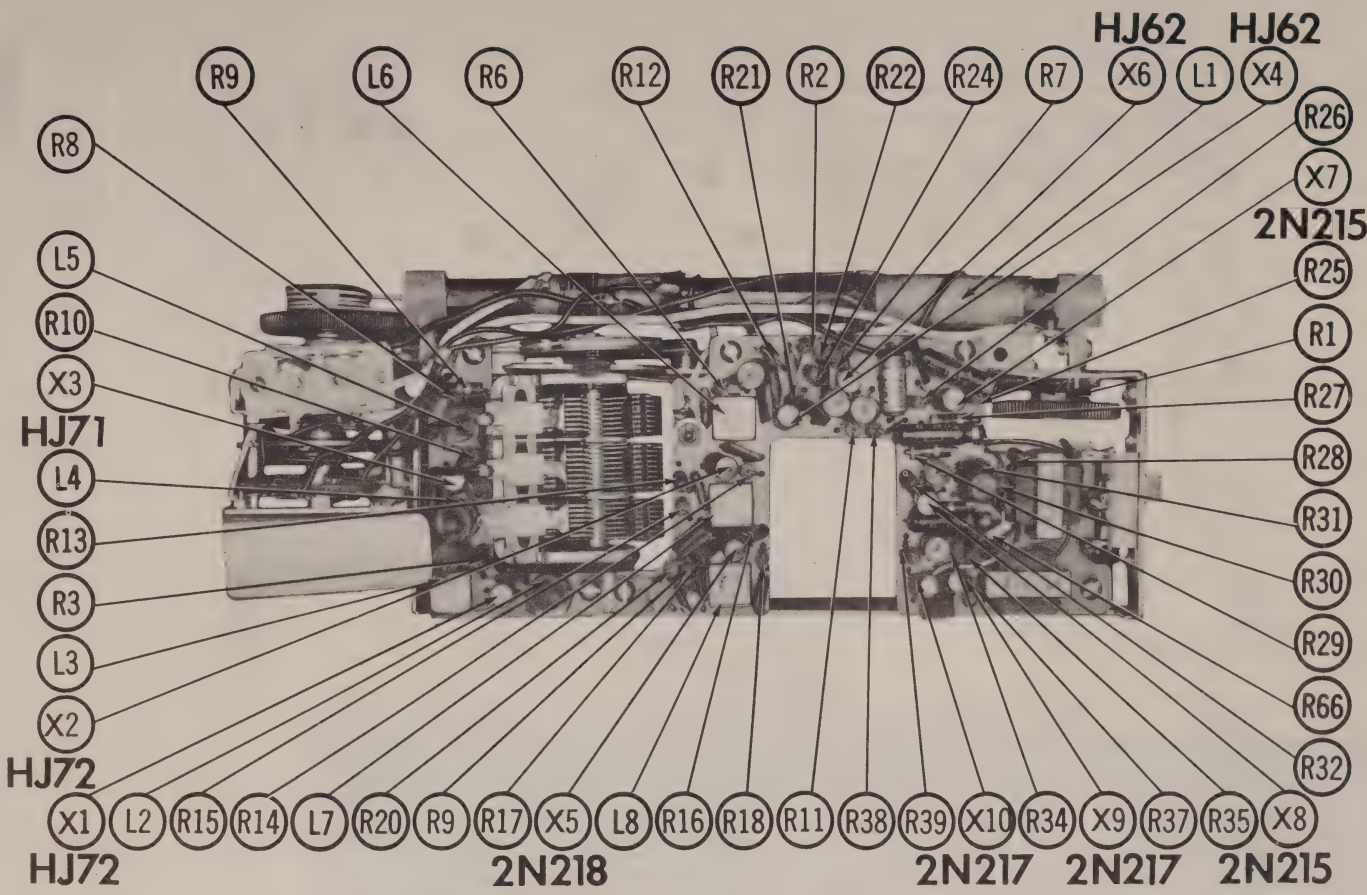
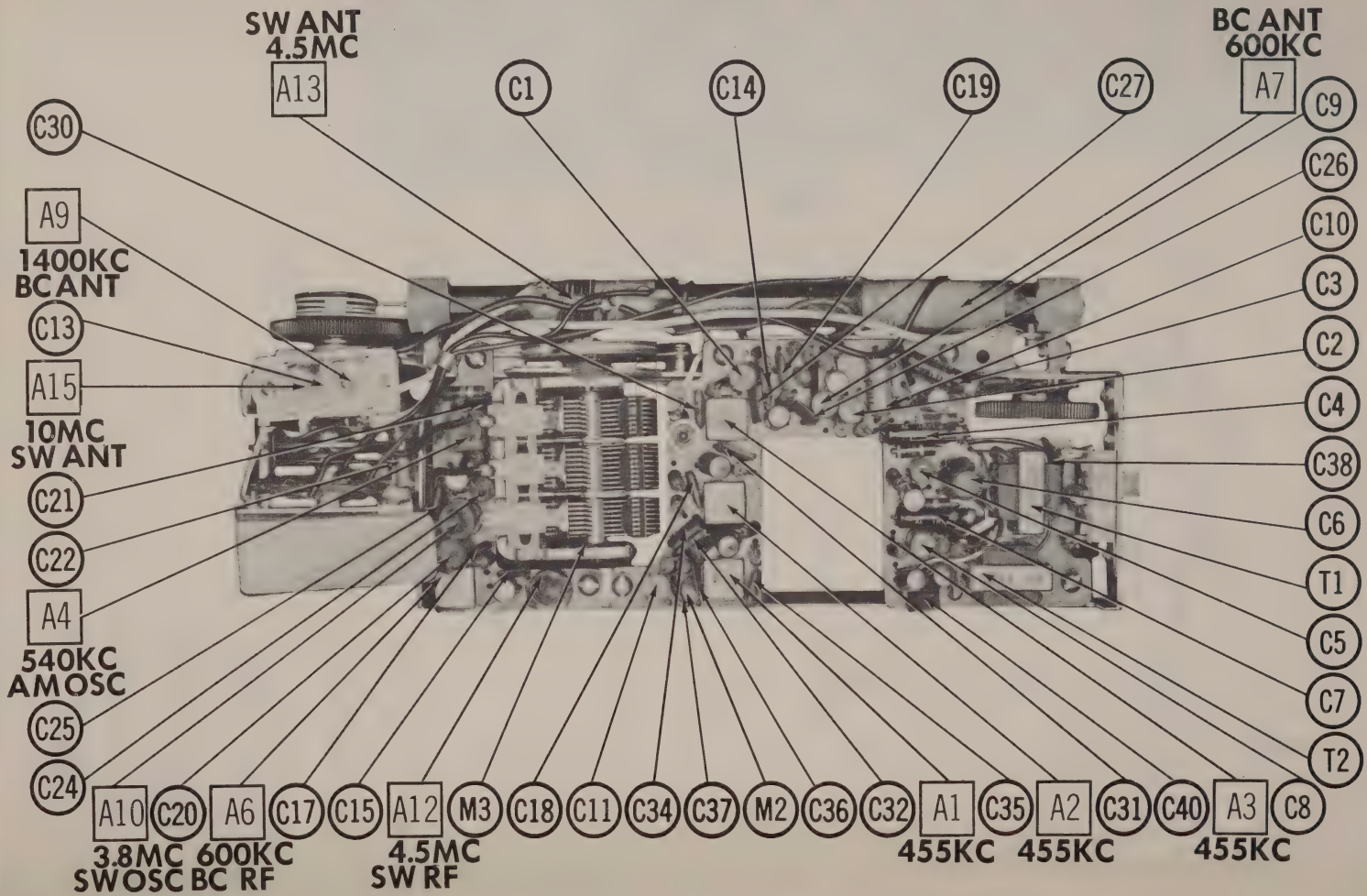
SHARP MODEL BX-326



CHASSIS TOP VIEW-RESISTOR, INDUCTOR & TRANSISTOR IDENT.



CHASSIS TOP VIEW-ALIGN., CAPACITOR & MISC. IDENT.

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	HJ72	RF Amplifier			PNP
	2N372*	RF Amplifier	2N372		PNP
X2	HJ72	Mixer			PNP
	2N372*	Mixer	2N372		PNP
X3	HJ71	Oscillator		2N485	PNP
	2N317*	Oscillator			PNP
X4	HJ62	1st IF Amplifier		2N483	PNP
	2N135*	1st IF Amplifier	2N139	2N482	PNP
X5	2N218	2nd IF Amplifier	2N218	2N483	PNP
X6	HJ62	Overload		2N362	PNP
	2N135*	Overload	2N139	2N483	PNP
X7	2N215	AF Amplifier	2N407	2N362	PNP
X8	2N215	Driver	2N407	2N362	PNP
X9	2N217	Output	2N407	2N361	PNP
X10	2N217	Output	2N407	2N361	PNP

* Alternate

ELECTROLYTIC CAPACITORS

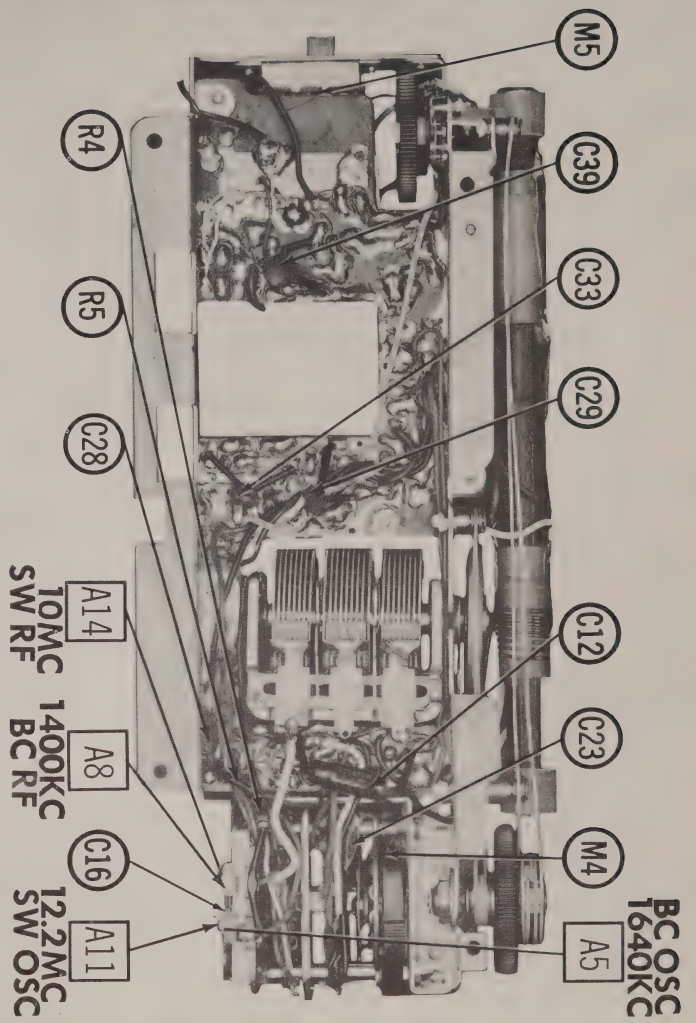
ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	SHARP PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	10	10	J324	PTT39	NLW10-10	MT1-5	TT12X10	MLV10-10	TE-1114
C2	10	10	J324	PTT39	NLW10-10	MT1-5	TT12X10	MLV10-10	TE-1114
C3	30	3	J321l	PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C4	30	3	J321l	PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C5	10	10	J324	PTT39	NLW10-10	MT1-5	TT12X10	MLV10-10	TE-1114
C6	10	10	J324	PTT39	NLW10-10	MT1-5	TT12X10	MLV10-10	TE-1114
C7	30	3	J321l	PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C8	10	10	J324	PTT39	NLW10-10	MT1-5	TT12X10	MLV10-10	TE-1114
C9	10	10	J324	PTT39	NLW10-10	MT1-5	TT12X10	MLV10-10	TE-1114
C10	10	10	J324	PTT39	NLW10-10	MT1-5	TT12X10	MLV10-10	TE-1114
C11	10	10	J324	PTT39	NLW10-10	MT1-5	TT12X10	MLV10-10	TE-1114
C12	30	6	J321	PTT27	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C13A B		#J355*						
C14	.04							
C15	.04							
C16A B C D		#J354*						
C17	.04	#J332						
C18	.04	#J332						
C19	.04	#J332						
C20	.0022 10%					CCD-222	GP222	10TS-D22
C21	.01		C80V103AM	DM-103	H-05S1	CCD-103	TA-110	TG-S10
C22	335 10%			D6-331	L10T33	CCD-331	GP333	10TS-T33
C23	.01		C80V103AM	DM-103	H-05S1	CCD-103	TA-110	TG-S10
C24	.001		C80V102AM	DM-102	H-05D1	CCD-102	B-210	TG-D10
C25	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20
C26	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20
C27	.04	#J332						
C28	.04	#J332						
C29	8		NPO-SI 8.2		C10V8C			10TCC-V82
C30	.04	#J332						
C31	.04	#J332						
C32	.04	#J332						
C33	4.5		NPO-SI 4.7	TCZ-4R7	C10V47C	CCTO-4R7	CNO-4R7	10TCC-V47
C34	.04	#J332						
C35	.04	#J332						
C36	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20
C37	.01		C80V103AM	DM-103	H-05S1	CCD-103	TA-110	TG-S10
C38	.01		C80V103AM	DM-103	H-05S1	CCD-103	TA-110	TG-S10
C39	.005		C80V502AM	DM-502	H-05S5	CCD-502	TA-250	TG-D50
C40	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20

\# Sharp Part Number. * 25mmf max, each section.

CHASSIS—BOTTOM VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	SHARP PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	5000Ω	1/4	J253					Volume & Switch

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R2	1000Ω				R21	2000Ω			
R3	1000Ω				R22	70K			
R4	10K				R23	20K			
R5	50K				R24	10K			
R6	1000Ω				R25	5000Ω			
R7	2000Ω				R26	50K			
R8	10K				R27	500Ω			
R9	30K				R28	30Ω			
R10	1000Ω				R29	3000Ω			
R11	100Ω				R30	20K			
R12	1000Ω				R31	2000Ω			
R13	1000Ω				R32	25K			
R14	500Ω				R33	200Ω			
R15	5000Ω				R34	5000Ω			
R16	50K				R35	330Ω			
R17	500Ω				R36	Temp. Comp.			Pt. #J245
R18	500Ω				R37	10Ω			
R19	500Ω				R38	100Ω			
R20	20K				R39	100Ω			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		SHARP PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1A	SW Loopstick	J6111					
B	BC Loopstick	J6110					
L2	SW RF	J6113					
L3	BC RF	J6112					
L4	SW Osc.	J619					
L5	BC Osc.	J612					
L6	1st IF	J624					
L7	2nd IF	J625					
L8	3rd IF	J6212					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SHARP PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	2.8	1	J116		TA-35	TR-7		

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SHARP PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	500Ω CT	10-12Ω	J117		TA-21①	TR-19		① Use 16Ω Tap

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	SHARP PART No.	QUAM PART No.	
SP1	3½"	PM	10-12Ω	J103	3A05Z12*	* Trim mounting to Fit.

BATTERIES

ITEM No.	VOLTAGE	SHARP PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1.5V			130		635		M-14R	4 Required

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		SHARP PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M2	1N34A	J242		1N34A	Detector (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	SHARP PART No.	NOTES
M3	Tuning Cap.	J353	3 Gang
M4	Switch	J121	Band Selector (Rotary Wafer Type)
M5	Switch	J123	Tone (Slide Type DPDT)

CABINETS & CABINET PARTS

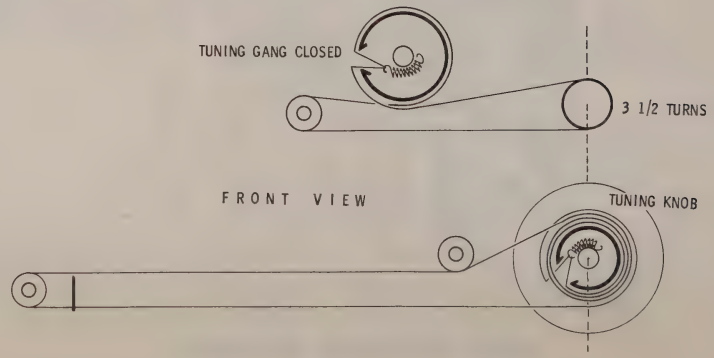
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Dial	J406	
Knob	J5015	Tuning
Knob	J5014	Volume
Knob	J5016	Selector
Cabinet Back	J7016	
Cabinet Back	J7015	

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

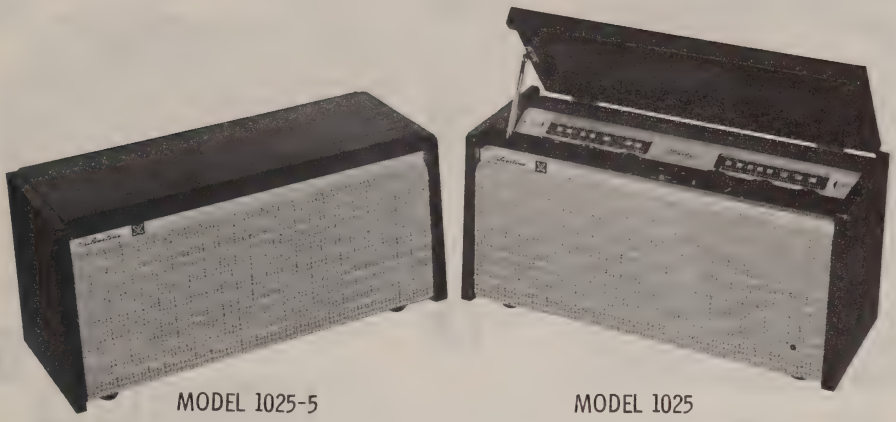
DIAL CORD STRINGING



PHOTOFACT® Folder with CIRCUITRACE®

SILVERTONE MODELS 1025, 1025-5 (Ch. 132.60901, 132.60902, 132.60903)

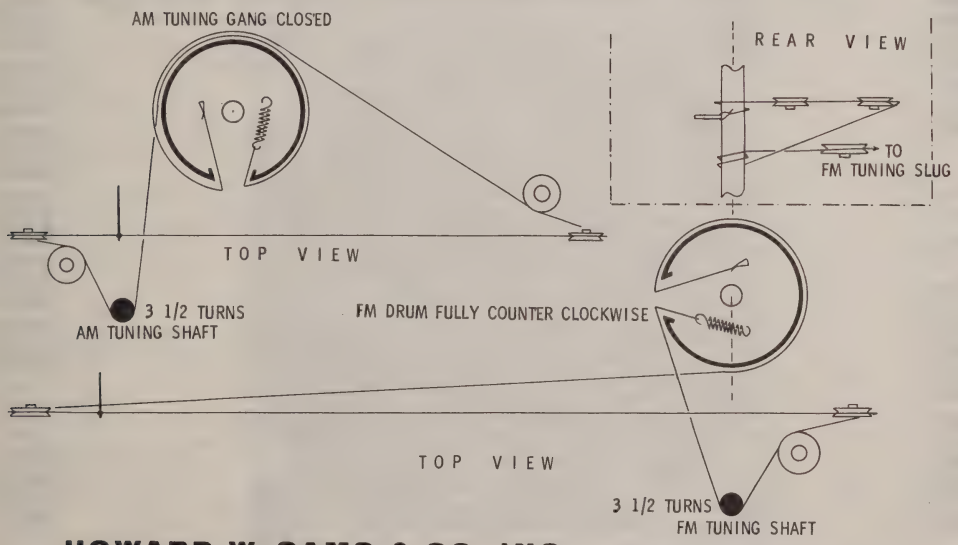
SILVERTONE MODELS 1025, 1025-5 (Ch. 132.60901, 132.60902, 132.60903)



MODEL 1025-5 MODEL 1025

TRADE NAME	Silvertone Models 1025 (Ch. 132.60901 or 132.60903); 1025-A (Ch. 132.60902) External Speaker Unit		
SUPPLIER	Sears Roebuck & Co., 925 S. Homan Ave., Chicago, Illinois		
TYPE SET	AC Operated 8 Tube FM-AM Receiver With Stereo Amplifier		
POWER SUPPLY	110 – 120 Volts AC, 60 Cycles	RATING	65 Watts, .65 Amp. @117 Volts AC
TUNING RANGE—BROADCAST	540 – 1620KC	FREQ. MOD.	88 – 108MC

DIAL CORD STRINGING



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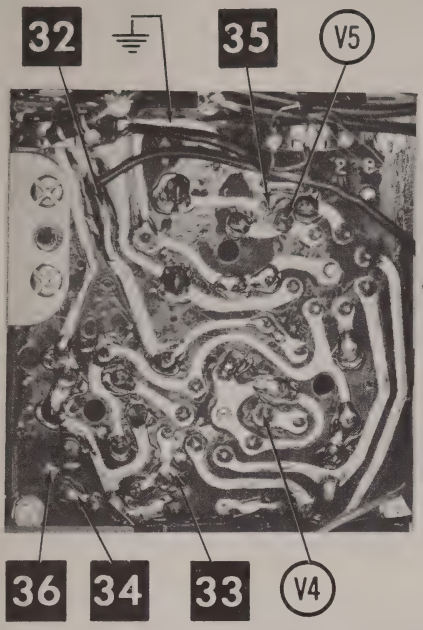
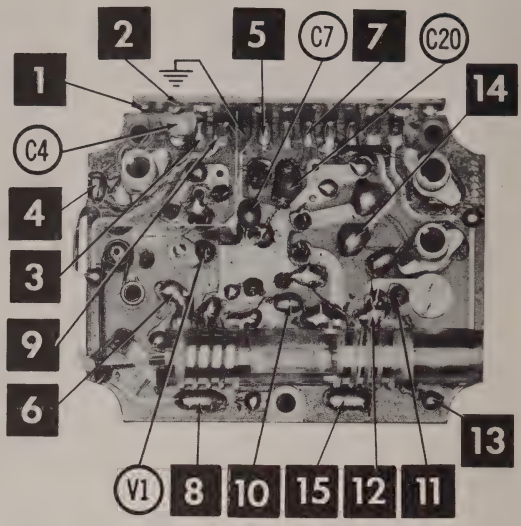
KK740

SET 554 FOLDER 12

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



AM PRINTED BOARD



FM RF SUB CHASSIS

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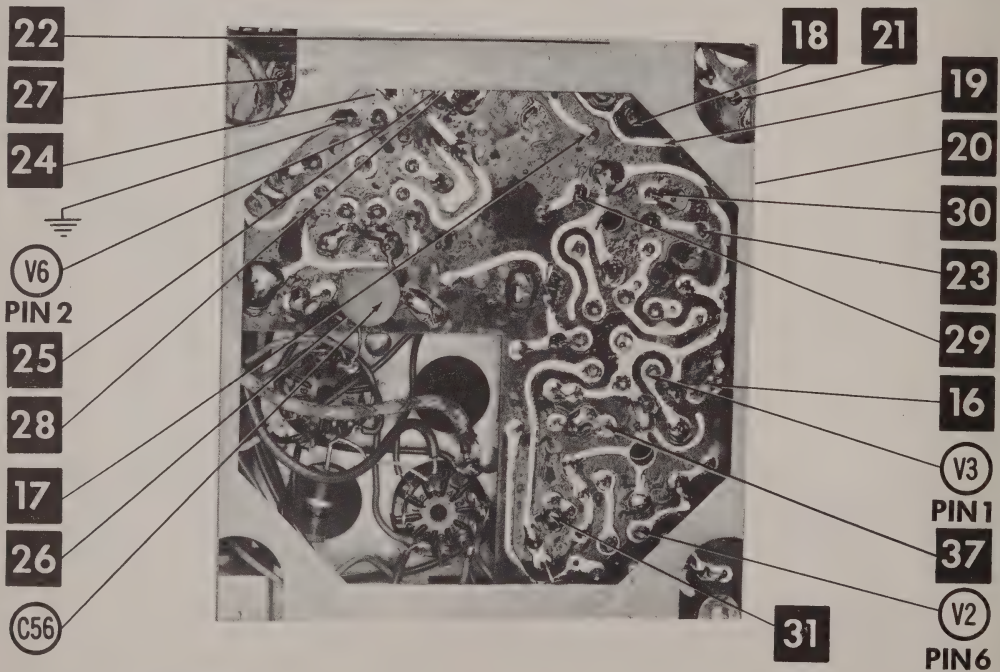

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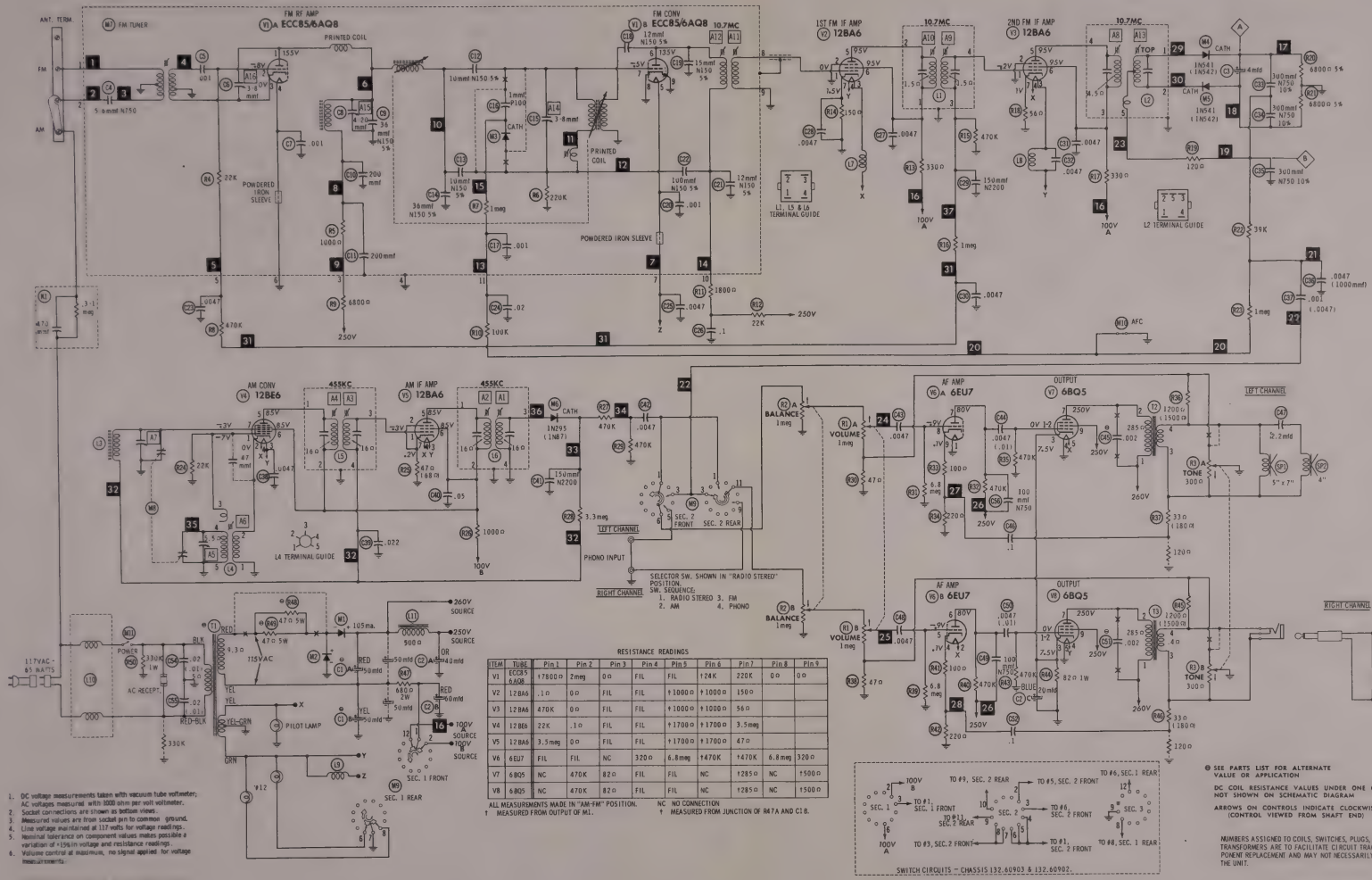
FM IF-AUDIO PRINTED BOARD



1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	ECC85 6AQ8	†780Ω	2meg	0Ω	FIL	FIL	†24K	220K	0Ω	0Ω
V2	12BA6	.1Ω	0Ω	FIL	FIL	†1000Ω	†1000Ω	150Ω		
V3	12BA6	470K	0Ω	FIL	FIL	†1000Ω	†1000Ω	56Ω		
V4	12BE6	22K	.1Ω	FIL	FIL	†1700Ω	†1700Ω	3.5meg		
V5	12BA6	3.5meg	0Ω	FIL	FIL	†1700Ω	†1700Ω	47Ω		
V6	6EU7	FIL	FIL	NC	320Ω	6.8meg	†470K	†470K	6.8meg	320Ω
V7	6BQ5	NC	470K	82Ω	FIL	FIL	NC	†285Ω	NC	†500Ω
V8	6BQ5	NC	470K	82Ω	FIL	FIL	NC	†285Ω	NC	†500Ω

ALL MEASURMENTS MADE IN "AM-FM" POSITION.
† MEASURED FROM OUTPUT OF M1.
NC- NO CONNECTION
† MEASURED FROM JUNCTION OF R47A AND C18.

SWITCH CIRCUITS - CHASSIS 132.60903 & 132.60902.

⊙ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE

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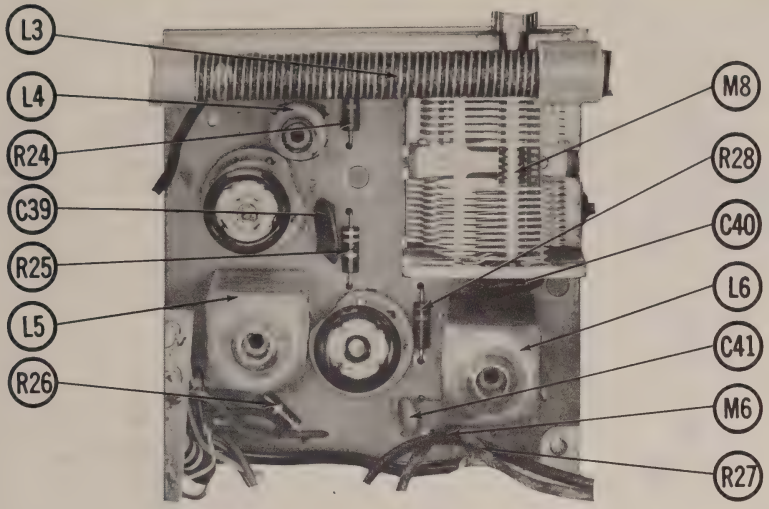
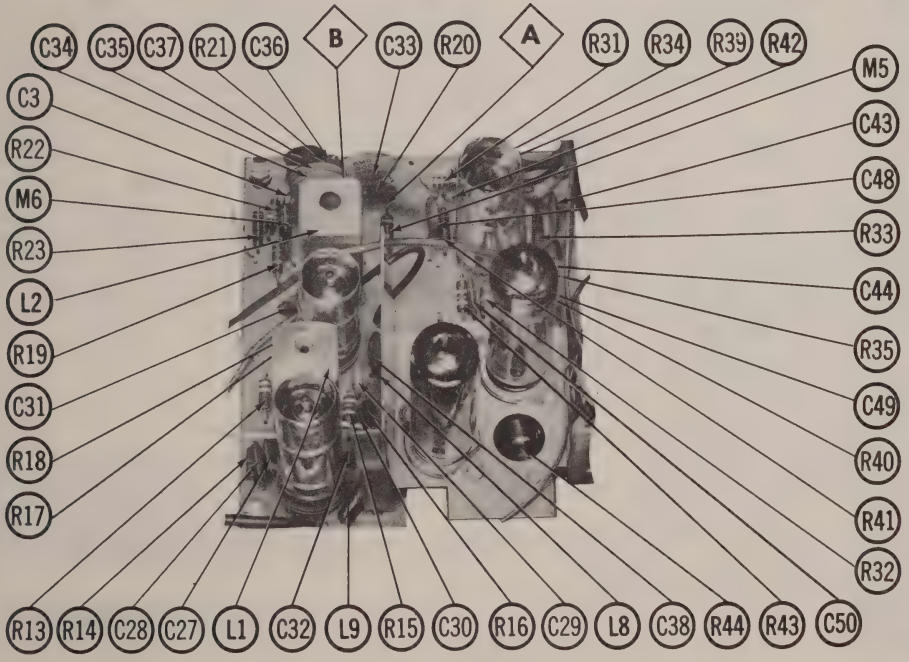
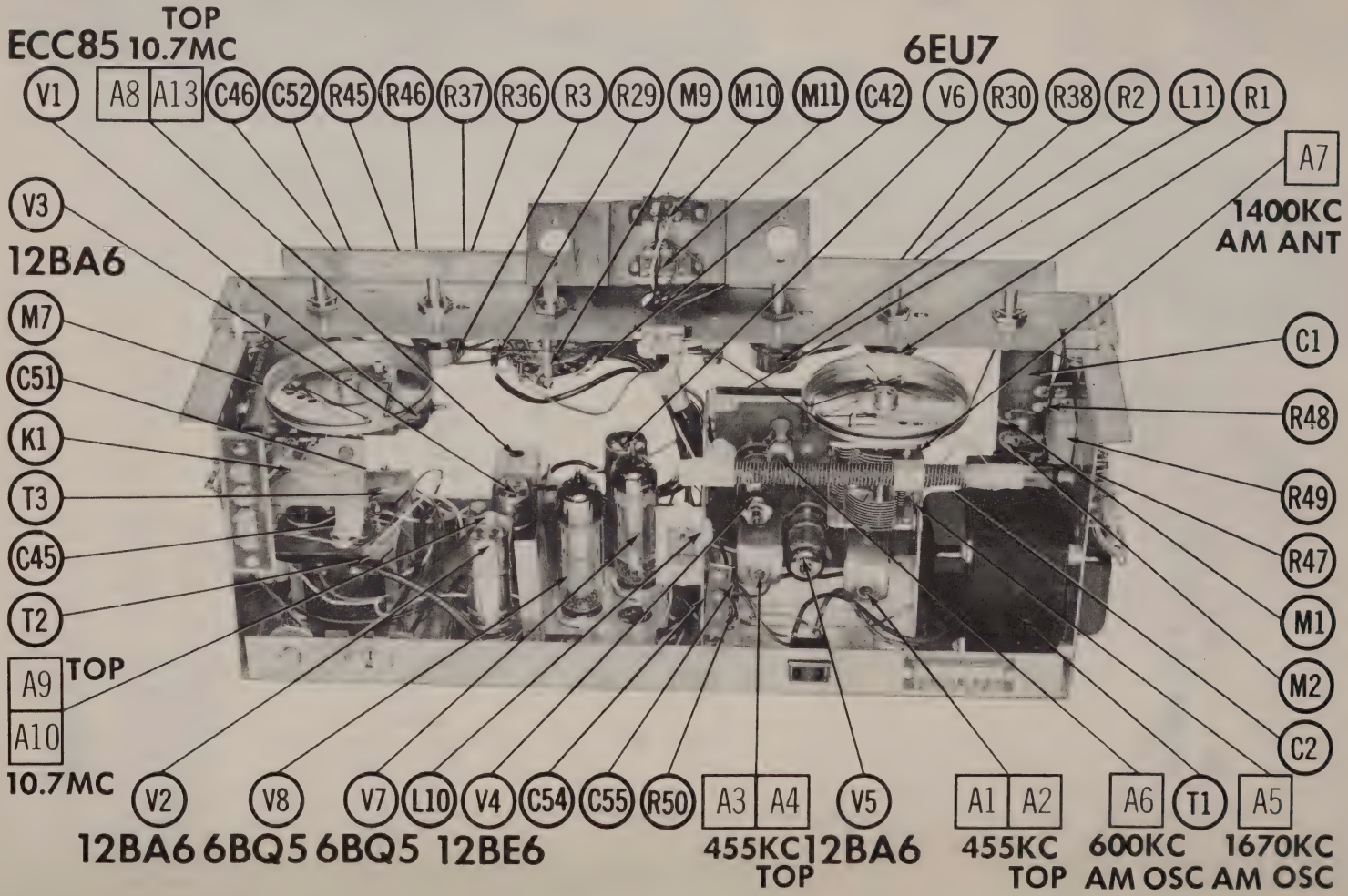
SILVERTONE MODELS 1025, 1025-5
(Ch. 132.60901, 132.60902, 132.60903)



AM PRINTED BOARD



FM IF-AUDIO PRINTED BOARD



CHASSIS TOP VIEW

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools:

A1 thru A4, A6, A8, A9, A10, A13...	GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440 WALSCO #2526, 2543, 2544, 2545
A5, A7.....	GENERAL CEMENT #5004, 5008, 5009 WALSCO #2520
A11, A12.....	GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089 WALSCO #2512, 2525, 2528
A14, A15, A16.....	GENERAL CEMENT #9440

AM ALIGNMENT — SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .05mfd to pin 7 (grid) of AM Converter. Low side to chassis.	455KC (400~ 30% AM)	(AM) Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.	1670KC	"	"	A5	"
3.	"	600KC	600KC	"	A6	"
4.	"	1400KC	1400KC Signal.	"	A7	Adjust for maximum output. Repeat Steps 2, 3 and 4.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM—SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
5.	Across FM antenna terminals.	10.7MC (Unmod.)	(FM) Point of non-interference.	DC probe to point Ⓐ. Common to chassis.	A8, A9, A10, A11, A12	Adjust for maximum deflection.
6.	"	"	"	DC probe to point Ⓑ. Common to chassis.	A13	Adjust for zero reading. A positive reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE—SELECTOR IN FM POSITION

Use frequency modulated signal with 60~ modulation and 450KC sweep. Use 120~ sawtooth voltage in scope for horizontal deflection.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
5.	Across FM antenna terminals.	10.7MC (450KC Swp)	(FM) Point of non-interference.	Vert. amp. to point Ⓐ. Low side to chassis.	A8, A9, A10, A11, A12	Disconnect stabilizing capacitor C3. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C3.
6.	"	"	"	Vert. amp. to point Ⓑ. Low side to chassis.	A13	Adjust to place marker at the center of crossover lines similar to Fig. 2. SLIGHTLY retouch A8 for maximum amplitude and straightness of cross-over lines.

FM RF ALIGNMENT — SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
7.	Across FM antenna terminals with 150Ω in each lead.	108.5MC (Unmod.)	(FM) High end stop.	DC probe to point Ⓐ. Common to chassis.	A14	Adjust Idler tension screw for loose string. Adjust A14 for maximum deflection.
8.	"	100MC	100MC	"	Idler tension screw.	Adjust for maximum deflection on VTVM.
9.	"	"	"	"	A15	"
10.	Check low end of dial for oscillations and if necessary, adjust A16 just enough to stop oscillations then repeat steps 9 and 10.					

FIG. 1

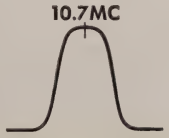
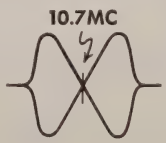
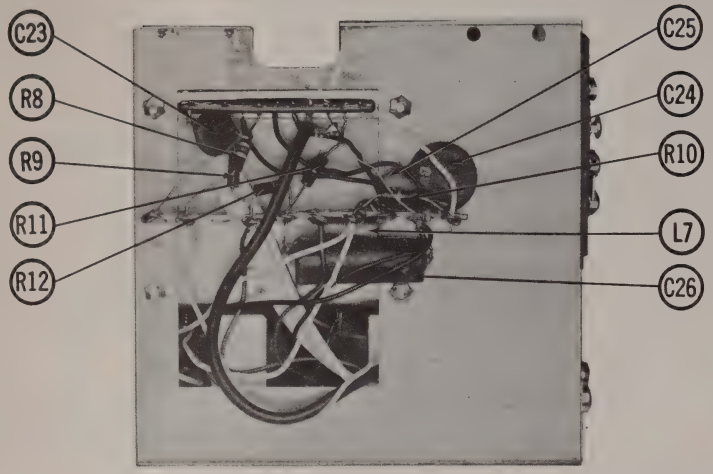
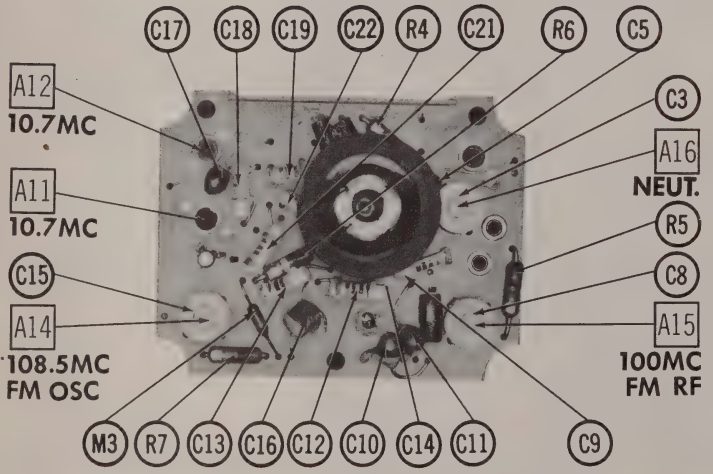


FIG. 2





FM RF TUNER CONNECTIONS



FM RF SUB CHASSIS-TOP VIEW

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE (• GENERAL ELECTRIC • RAYTHEON • SYLVANIA •)	ITEM No.	USE	TYPE
V1	FM RF Amp. -FM Conv.	ECC85/6AQ8	V6	Left Channel AF Amp. - Right Channel AF Amp.	6EU7
V2	1st FM IF Amplifier	12BA6	V7	Left Channel Output	6BQ5
V3	2nd FM IF Amplifier	12BA6	V8	Right Channel Output	6BQ5
V4	AM Converter	12BE6			
V5	AM IF Amplifier	12BA6			

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA SILVERTONE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	50	150	44772-11 ①	PRS1480	BR5015	QT1-16	TCS48	TD-50-150	TVA-1414
B	50	150	①	PRS1480	BR5015	QT1-16		TD-50-150	TVA-1414
C2A	40	300	44772-12	PR3-030	BBRQ0789.5	QT4-2	WT407	CDBQ-4422	TVA-4618
B	60	150							
C	20	25							
C3	4	50	45238-2	PTT90	NLW4-50	MT1-3	TT50X4	MLV5-50	TE-1302.1

① Chassis 132.60903 use 80-80mfd (C1) in this application. (C1 Part #44772-14).

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C4	5.6 N750							
C5	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C6	3-8							
C7	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C8	4-20							
C9	36 N150 5%					*		10TCP-Q39
C10	200		DI-200	DD-201	L10T2	CCD-201	GP320	10TS-T20
C11	200		DI-200	DD-201	L10T2	CCD-201	GP320	10TS-T20
C12	10 N150 5%					*		10TCP-Q10
C13	10 N150 5%					*		10TCP-Q10
C14	36 N150 5%					*		10TCP-Q39
C15	3-8							
C16	1 P100					*		
C17	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C18	12 N150 5%					*		10TCP-Q12
C19	15 N150 5%					*		10TCP-Q15
C20	.001		BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C21	12 N150 5%					*		10TCP-Q12
C22	100 N150 5%					*		10TCP-T10
C23	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C24	.02		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C25	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C26	.1 400V		P488N-1	DF-104	CUB4P1	4DP-3-104	GEM-401	4TM-P10
C27	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C28	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C29	150 N2200	#43957-2				*		
C30	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C31	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C32	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C33	300 N750 10%		N750-DI 330	TCN-330	C10T33U	CCTN-301	CN7-333	10TCU-T33
C34	300 N750 10%		N750-DI 330	TCN-330	C10T33U	CCTN-301	CN7-333	10TCU-T33
C35	300 N750 10%		N750-DI 330	TCN-330	C10T33U	CCTN-301	CN7-333	10TCU-T33
C36	.0047	(1000) †	BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C37	.001	(.0047) †	BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C38	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C39	.022		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C40	.05		BPD-05	DD-503	CUB2S5	4DP-3-503	GP150	5HK-S50
C41	150 N2200	#43957-2				*		
C42	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C43	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C44	.0047	(.01) †	BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C45	.002	Note 1	BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C46	.1 100V		P288N-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2TM-P10
C47	2.2mfd 3V	#44684-15		UK-225				HY-150
C48	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C49	100 N750		N750-DI 100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10
C50	.0047	(.01) †	BPD-0047	DD-472	BYA10D47M	CCD-472	B-247	5HK-D47
C51	.002	Note 1	BPD-002	DD-202	BYA10D2	CCD-202	B-220	5HK-D20
C52	.1 100V		P288N-1	DF-104	CUB2P1	1DP-2-104	GEM-201	2TM-P10
C53	2.2mfd 3V	#44684-15		UK-225				HY-150
C54	.02	(.01) †	BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C55	.02	(.01) †	BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C56	100 N750 10%		N750-100	DTN-100	C10T1U	CCTN-101	CN7-310	10TCU-T10

Note 1. Not used in Chassis 132.60903. † Alternate Value. # Silvertone Part Number.
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA SILVERTONE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	1meg		47600-4	B-70	AD47-1meg-Z		FA16A	Volume, Right Channel
B	1meg			SR-70	Not Req.		RU16A	Volume, Left Channel
C	Shaft			Not Req.	FS-3		CS3500	
R2A	1meg		47600-6	B-744			FA16A	Balance, Right Channel
B	1meg			SR-68			RU16R	Balance, Left Channel
C	Shaft			Not Req.			CS3500	
R3A	300Ω		47600-5	B-4				Tone, Right Channel
B	300Ω			SR-4				Tone, Left Channel

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA: IRC PART No.	REPLACEMENT DATA: WORKMAN TV PART No.	REMARKS
R4	22K			
R5	1000Ω			
R6	220K			
R7	1meg			
R8	470K			
R9	6800Ω			
R10	100K			
R11	1800Ω			
R12	22K			
R13	330Ω			
R14	150Ω			
R15	470K			
R16	1meg			
R17	330Ω			
R18	56Ω			
R19	120Ω			
R20	6800Ω 5%			
R21	6800Ω 5%			
R22	39K			
R23	1meg			
R24	22K			
R25	47Ω			(68Ω) †
R26	1000Ω			
R27	470K			
R28	3.3meg			
R29	470K			
R30	47Ω			
R31	6.8meg			
R32	470K			
R33	100Ω			
R34	220Ω			
R35	470K			
R36	1200Ω			(1500Ω) †
R37	33Ω			(180Ω) †
R38	47Ω			
R39	6.8meg			
R40	470K			
R41	100Ω			
R42	220Ω			
R43	470K			
R44	82Ω 1W			
R45	1200Ω			(1500Ω) †
R46	33Ω			(180Ω) †
R47	680Ω 2W			
R48	47Ω 5W	PW5-47	5W-SQ-47	Note 1
R49	47Ω 5W	PW5-47	5W-SQ-47	Note 1
R50	330K 1W			

Note 1. Not used in Chassis 132. 60903.
† Alternate Value.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	SILVERTONE PART No.	REPLACEMENT DATA
K1	Antenna Isolation	470mmf, .3-1meg	47796-2	Centralab RC-471 Sprague AC1-1

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA: SILVERTONE PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	NOTES
L1	2nd FM If	46971-3	FM-256	1463-PC	RTC-9046	T654	
L2	Ratio Detector	45240	FM-257	1465-PC	RTC-9050	T659	
L3	Loopstick	46568-7	BC-419	705-A		T532	
L4	AM Osc.	43644-7					
L5	1st AM IF	44282-1	BC-356	13-PC9	RTC-8683	T614	
L6	2nd AM IF	44282-1	BC-357	13-PC10	RTC-8684	T615	
L7	Fil. Choke(1.6uh)	49515-3	BC-562	4604	RTC-8516	T856	
L8	Fil. Choke(1.5uh)	49515-1	BC-562	4604	RTC-8516	T856	
L9	Fil. Choke(1.5uh)	49515-1	BC-562	4604	RTC-8516	T856	
L10A	Line Choke(3.6uh)	24308-3	BC-564	4608	RTC-8518	T858	
B	Line Choke(3.6uh)		BC-564	4608	RTC-8518	T858	

FILTER CHOKE

ITEM No.	RATINGS: CURRENT (Measured)	DC RES.	INDUCTANCE (0 CURRENT 1000 ∿)	REPLACEMENT DATA: SILVERTONE PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
L11	.025A	500Ω	10HY	47828-3	C-2976①	C-1707①	20C52①	C-3X①	①Drill New Mtg. Hole (s).

TRANSFORMER (POWER)

ITEM No.	RATING: PRI.	SEC. 1	SEC. 2	REPLACEMENT DATA: SILVERTONE PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	117V@ .65A	115V@ .250A AC	12.6VCT @1.6A	46070-4 ①					① Part #46070-5 used in Chassis 132. 60903

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE: PRI.	SEC.	REPLACEMENT DATA: SILVERTONE PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T2	5600Ω	6-8Ω	46131-2	A-2902	A-3823	24S07	S-54X	
T3	5600Ω	6-8Ω	46131-2	A-2902	A-3823	24S07	S-54X	

SPEAKER

ITEM No.	TYPE: SIZE	FIELD	V. C. IMP.	REPLACEMENT DATA: SILVERTONE PART No.	QUAM PART No.	NOTES
SP1	5"x 7"	PM	6-8Ω	46130-4	57A1Z8	* Model 1025-5 Speaker Cabinet
SP2	4"	PM	6-8Ω	46129-2	4A05Z8	
SP3	5"x 7"	PM	6-8Ω	46130-4 *	57A1Z8	
SP4	4"	PM	6-8Ω	46129-2 *	4A05Z8	

POWER RECTIFIERS

ITEM No.	RATING: CURRENT (Measured)	REPLACEMENT DATA: SILVERTONE PART No.	RCA PART No.	SARKES TARZIAN PART No.	NOTES
M1	.105A	47126-1	1N1764	2F4	
M2	.140A	47126-1	1N1764	2F4	

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA: SILVERTONE PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	NOTES
M3					AFC (Part of M7)
M4	1N541			1N295	Ratio Detector (Alternate 1N542)
M5	1N541			1N295	Matched Pair
M6	1N295			1N295	AM Detector (Alternate 1N87)

MISCELLANEOUS

ITEM No.	PART NAME	SILVERTONE PART No.	NOTES
M7	FM Tuner	46969-2	Complete
M8	Tuning Cap.	49305-1	2 Gang
M9	Switch	46967-4	Function (Rotary Wafer Type)
M10	Switch	25525-1	AFC (SPDT Slide Type)
M11	Switch	25525-2	Power Off-On (SPDT Slide Type)

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Crystal	49268	Dial, AM
Crystal	49276	Dial, FM
Pointer	49414-1	Dial
Knob	49272-29	Black
Cabinet	49266	Mahogany, Model 1025
Cabinet	49267	Mahogany, Model 1025-5 (Speaker)

WIRING DATA

General-use Unshielded Hook-up Wire.....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors
Power Cord (Interlock Type) ..... Use BELDEN No. 8874
Low-Loss Shielded Lead (Interconnecting)..... Use BELDEN No. 8401
Phono Pick-up Arm Cable .....Use BELDEN No. 8430 (Two Conductor - Twisted)

PHOTOFACT® Folder

**SYMPHONIC
MODEL 1740**

SYMPHONIC
MODEL 1740

SYMPHONIC
MODEL 1740

TRADE NAME	Symphonic Model 1740
MANUFACTURER	Symphonic Radio & Electronics Corp., 235 Jersey Ave., New Brunswick, N. J.
TYPE SET	AC Operated 3 Tube Stereo Phono Amplifier With 4 Speed Automatic Record Changer
POWER SUPPLY	110 — 120 Volts AC, 60 Cycles RATING 32 Watts, .35 Amp. @ 117 Volts AC (Less Motor)

FOR SERVICE INFORMATION ON RECORD CHANGER — SEE TELEFUNKEN TW560 — PHOTOFACT SET 371 FOLDER 12 OR RECORD CHANGER MANUAL RC-10

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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PARTS LIST AND DESCRIPTIONS

TUBES

◆ GENERAL ELECTRIC ◆		RAYTHEON ◆ SYLVANIA ◆			
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	Channel 1 AF Amp. - Channel 2 AF Amp.	12AX7A	V2 V3	Channel 1 Output Channel 2 Output	50L6GT 50L6GT

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	SYMPHONIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1A	60	150	CE-147	PRS3800	BBRT84215	QT3-6	TCT3119	TDLT-7	TVA-3455
B	40	150							
C	20	150							

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C2	.05 400V		P488N-05	DD-503	CUB4S5	4DP-3-503	GEM-415	4TM-S50	
C3	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C4	100	Note 1	DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10	
C5	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10	
C6	100	Note 1	DI-100	DD-101	L10T1	CCD-101	GP310	10TS-T10	
C7	.05 400V		P488N-05	DD-503	CUB4S5	4DP-3-503	GEM-415	4TM-S50	

Note 1. Not used in some versions.

CONTROLS

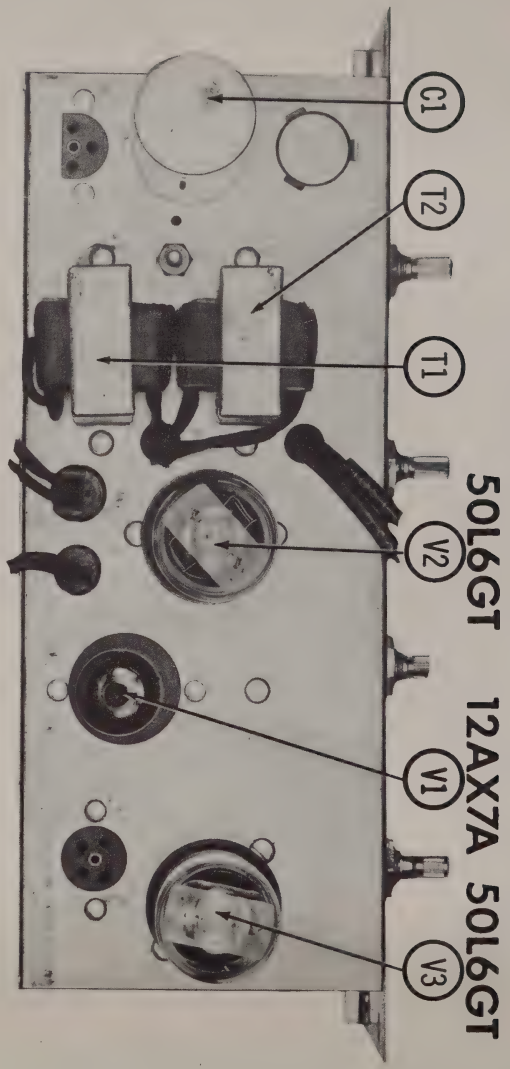
ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	SYMPHONIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1A	3meg		VC-269	B-85			FA36A	Loudness, Channel 1
B	3meg			SR-85			RU36A	Loudness, Channel 2
C	Shaft			Not Req.			CS3500	
R2A	500K		VC-270	B-60	AD47-500K-Z		FA55A	Treble, Channel 1
B	500K			SR-60	Not Req.		RU55A	Treble, Channel 2
C	Shaft			Not Req.	KSS-3		CS3500	
R3A	3meg		VC-269	B-85			FA36A	Bass, Channel 1
B	3meg			SR-85			RU36A	Bass, Channel 2
C	Shaft			Not Req.			CS3500	
R4A	4meg		VC-330	B-86	A47-4meg-S	B11-240	U67	Balance
B	Shaft			Not Req.	KSS-3	SK1	Not Req.	

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R5	100K				R10	180Ω 1W			
R6	6.8meg				R11	1000Ω 1W			
R7	180Ω 1W				R12	100Ω			
R8	100K				R13	22Ω 1W			
R9	6.8meg				R14	47Ω 2W			

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	SYMPHONIC PART No.	REPLACEMENT DATA
K1 K2	Tone Comp. Audio Coupling	(2) .002mfd, (2) 100K (2) 100mmf, (2) .01mfd, (2) 1000Ω, (2) 270K, (2) 470K	PC-4747 PC-3932-1	

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	SYMPHONIC PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1 T2	2700Ω 2700Ω	3-4Ω 3-4Ω	TR-198 TR-198	A-3025 A-3025	A-3332 A-3332	24S53 24S53	S-12X S-12X	

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	SYMPHONIC PART No.	QUAM PART No.	
SP1 SP2	8" 8"	PM PM	3-4Ω 3-4Ω	SP-804 SP-804	8A31PA3.4 8A31PA3.4	

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT (Measured)	SYMPHONIC PART No.	RCA PART No.	SARKES TARZIAN PART No.	
M1	.090A	SR100 ♦	1N1763 *	100 ♦	♦ Selenium * Silicon, Add surge limiter

PHONO CARTRIDGE & NEEDLES

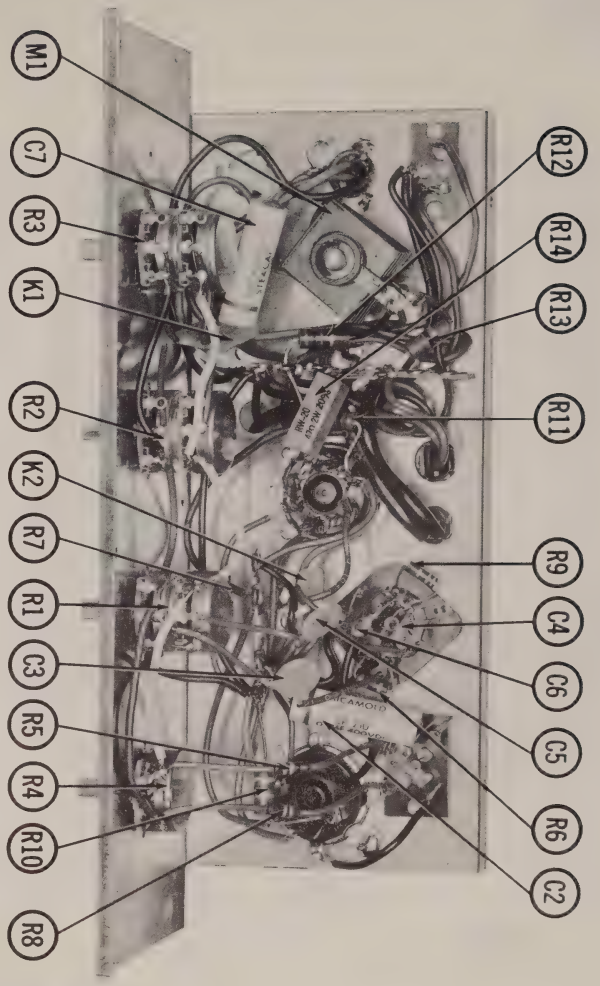
*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

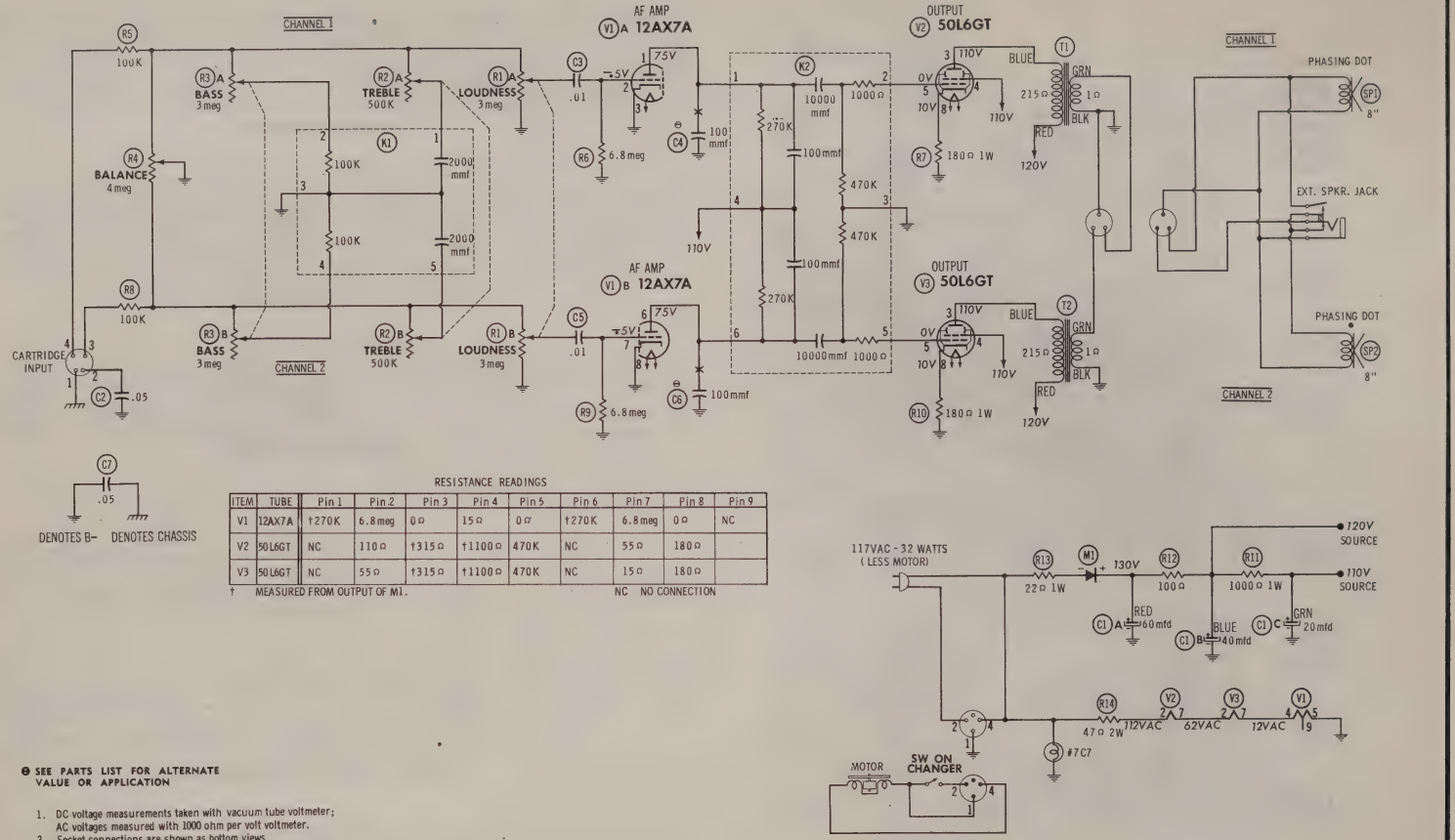
ITEM No.	REPLACEMENT DATA								NOTES
	SYMPHONIC PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.		
	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	
M2	T20/2	A20/2 *					16T-S	Not Req.	

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord	Use BELDEN No. 1765-B (6 Ft. Length) 1725-K (7½ Ft. Length)
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No. 8401
Phono Pick-up Arm Cable	Use BELDEN No. 8430 (Two Conductor - Twisted)

CHASSIS—BOTTOM VIEW





RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	12AX7A	†270K	6.8meg	0Ω	15Ω	0Ω	†270K	6.8meg	0Ω	NC
V2	50L6GT	NC	110Ω	†315Ω	†1100Ω	470K	NC	55Ω	180Ω	
V3	50L6GT	NC	55Ω	†315Ω	†1100Ω	470K	NC	15Ω	180Ω	

† MEASURED FROM OUTPUT OF M1. NC NO CONNECTION

❸ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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SYMPHONIC MODEL 1740

PHOTOFACT® Folder with CIRCUITRACE®

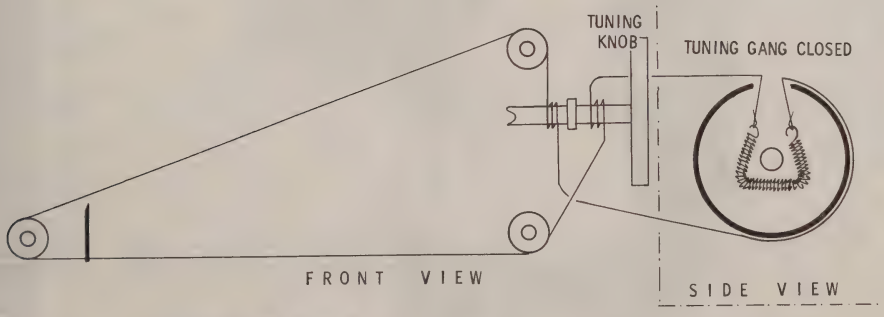
TOSHIBA MODELS 10TL-429F, 10TL-429FY

TOSHIBA MODELS
10TL-429F, 10TL-429FY

MODEL 10TL429F

TRADE NAME	Toshiba Models 10TL-429F, 10TL-429FY		
IMPORTER	Transistor World Corp., 52 Broadway, New York 4, N. Y.		
TYPE SET	Battery Operated Transistorized FM-AM Portable Receiver		
POWER SUPPLY	6 Volts DC	RATING	23MA @ 6 Volts DC (AM No Signal, Min. Volume) 30MA @ 6 Volts DC (AM Signal, Normal Volume) 25MA @ 6 Volts DC (FM No Signal, Min. Volume) 40MA @ 6 Volts DC (FM Signal, Normal Volume)
TUNING RANGE—BROADCAST	540-1600KC	FREQ. MOD.	88 — 108MC

DIAL CORD STRINGING



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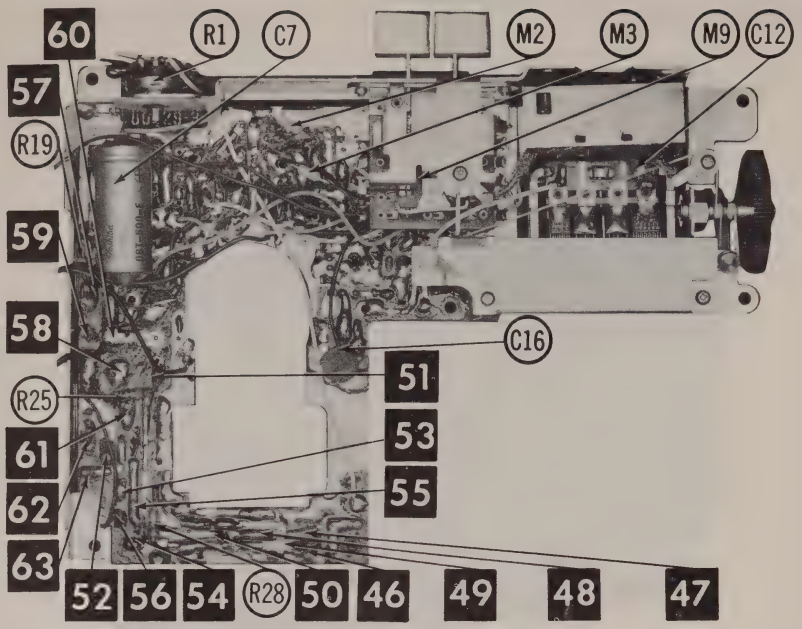
SET 554 FOLDER 14



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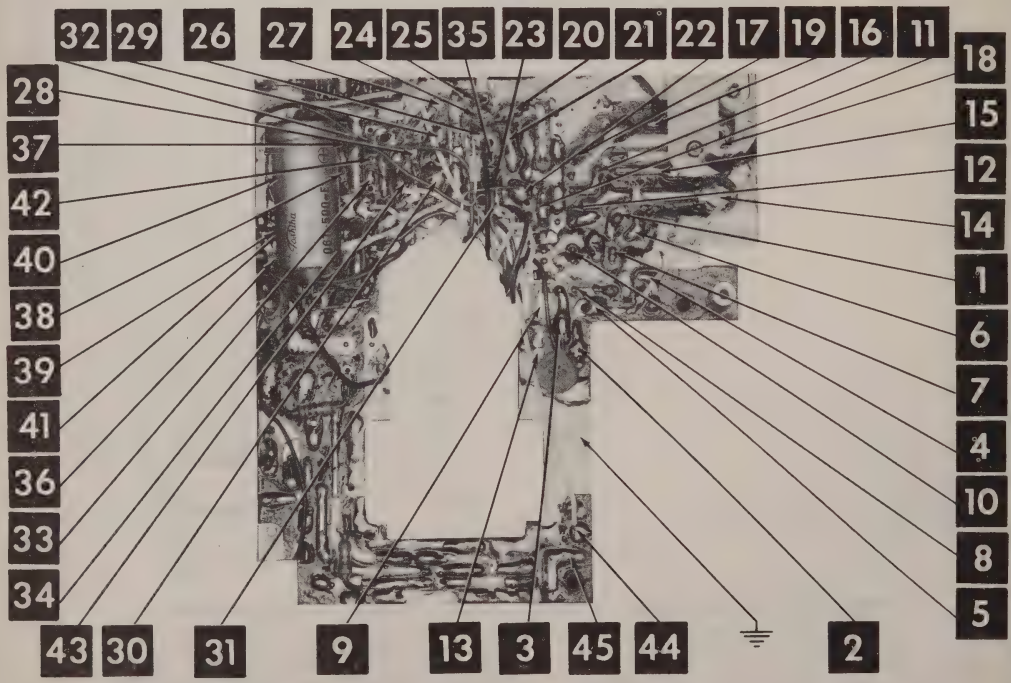
CHASSIS-BOTTOM VIEW



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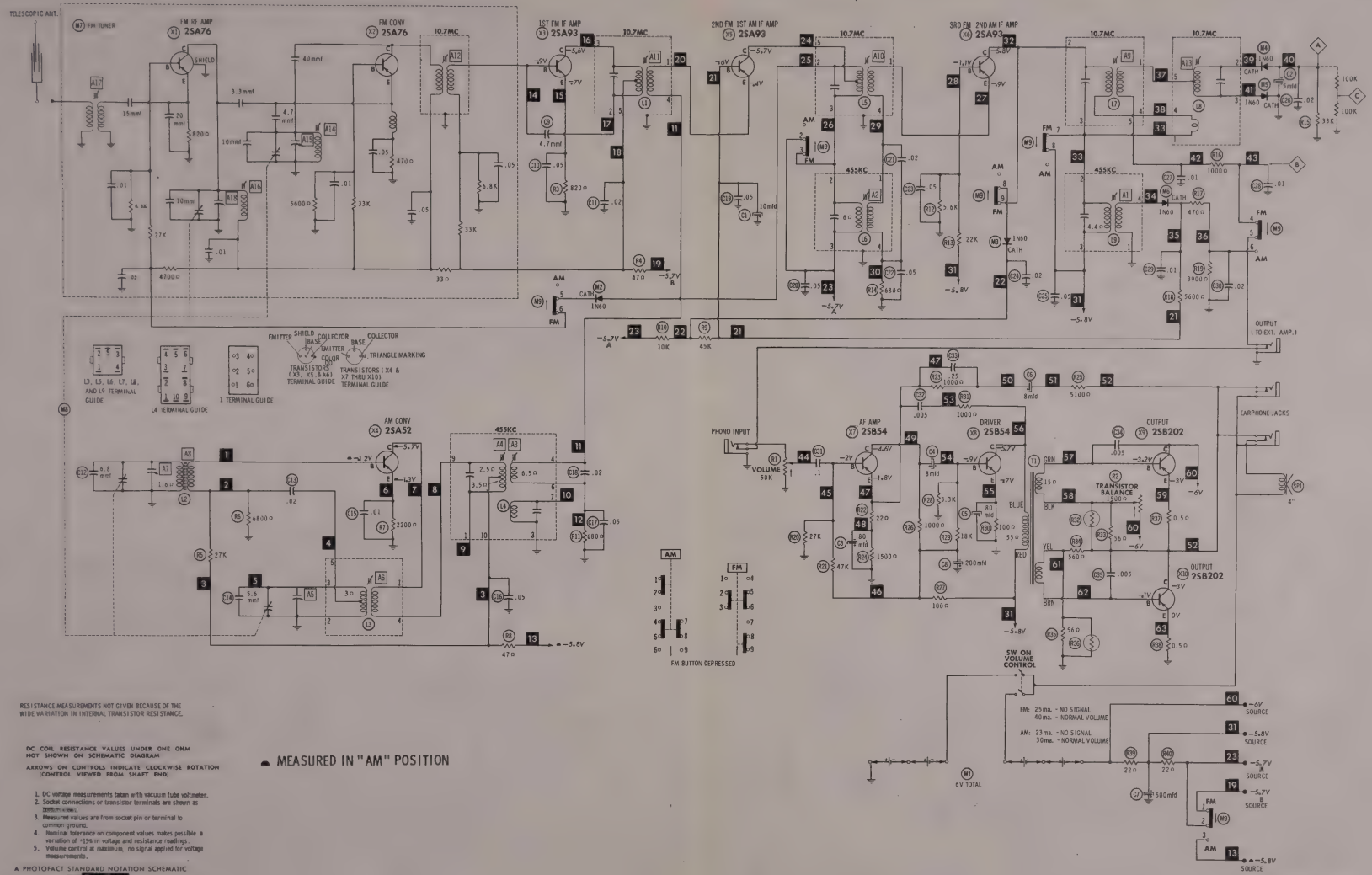
CHASSIS-BOTTOM VIEW



RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom view.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

● MEASURED IN "AM" POSITION

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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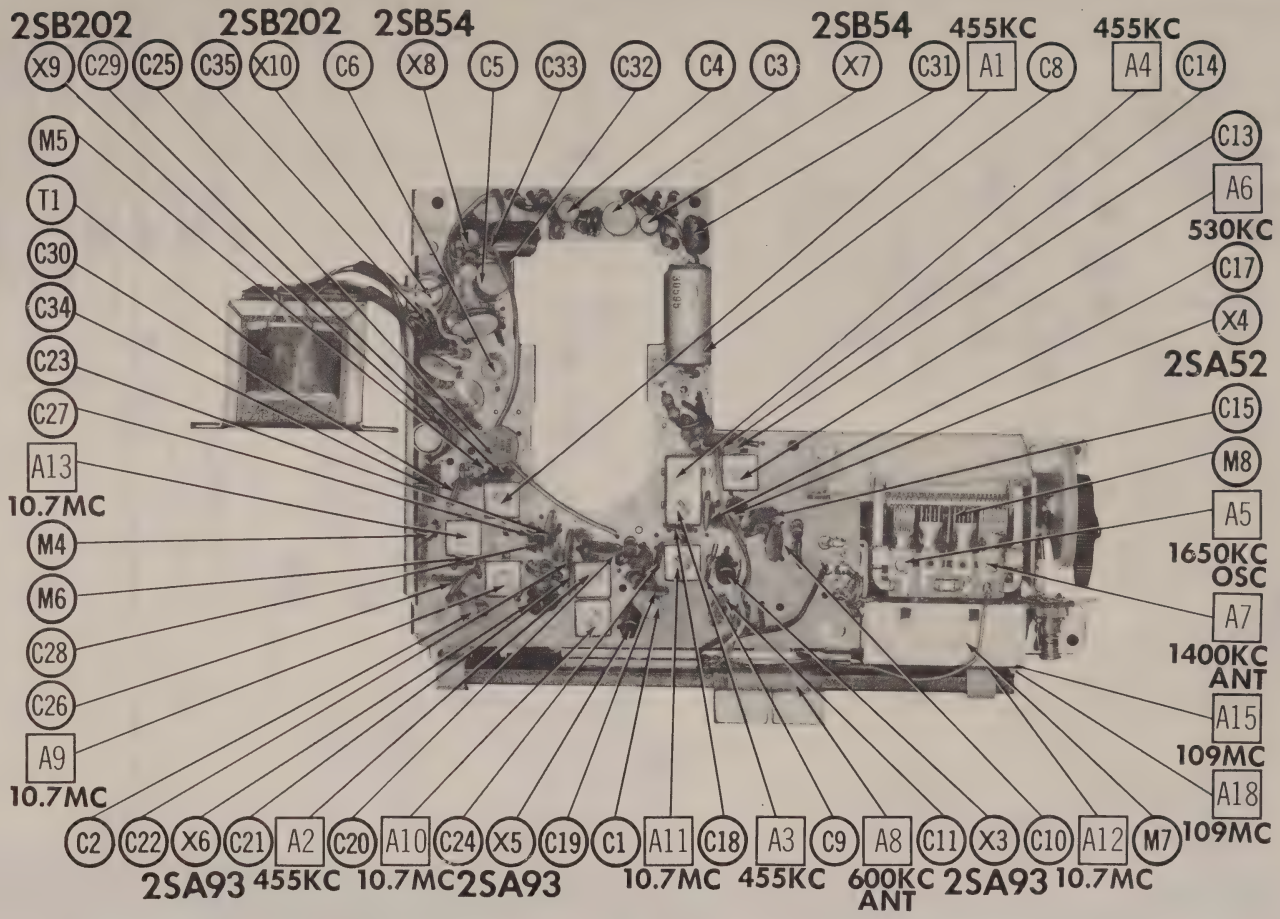
TOSHIBA MODELS 10TL-429F, 10TL-429FY



CHASSIS TOP VIEW-ALIGNMENT, CAPACITOR, TRANSISTOR & MISC. IDENT.

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Use only enough generator output to provide a usable indication.

Suggested Alignment Tools: A1 thru A4, A9 thru A13.... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538

A5, A7..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089
WALSCO #2512, 2525, 2528

A6..... GENERAL CEMENT #8282, 8606, 8606-L, 9091
WALSCO #2526, 2541, 2542, 2543, 2544

AM ALIGNMENT — SELECTOR IN AM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.	455KC (400~ 30% AM)	(AM) Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	"	1650KC	"	"	A5	"
3.	"	530KC	"	"	A6	"
4.	"	1400KC	1400KC Signal.	"	A7	"
5.	"	600KC	600KC Signal.	"	A8	Adjust for maximum output by sliding coil along ferrite core. Repeat Steps 2 thru 5.

FM IF ALIGNMENT USING AM SIGNAL GENERATOR AND VTVM — SELECTOR IN FM POSITION

Connect two matched 100K (± 1%) resistors in series from point Ⓐ to chassis. The junction of these two resistors is alignment point Ⓒ as shown on the schematic.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
6.	High side thru .02mfd to FM RF stator lug of tuning gang. Low side to chassis.	10.7MC (Unmod.)	(FM) Point of non-interference.	DC probe to point Ⓐ. Common to chassis.	A9, A10, A11, A12	Adjust for maximum deflection.
7.	"	"	"	DC probe to point Ⓑ. Common to point Ⓒ.	A13	Adjust for zero reading. A positive and negative reading will be obtained on either side of the correct setting.

FM IF ALIGNMENT USING FM SIGNAL GENERATOR AND OSCILLOSCOPE — SELECTOR IN FM POSITION

Use frequency modulated signal with 60~ modulation and 450KC sweep. Use 120~ sawtooth voltage in scope for horizontal deflection.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT SCOPE	ADJUST	REMARKS
6.	High side thru .02mfd to FM RF stator lug of tuning gang. Low side to chassis.	10.7MC (450KC Swp)	(FM) Point of non-interference.	Vert. amp. to point Ⓐ. Low side to chassis.	A9, A10, A11, A12	Disconnect stabilizing capacitor C2. Adjust for maximum gain and symmetry of response similar to Fig. 1 with markers as shown. Reconnect C2.
7.	"	"	"	Vert. amp. to point Ⓑ. Low side to chassis.	A13	Adjust to place marker at the center of crossover lines similar to Fig. 2. SLIGHTLY retouch A9 for maximum amplitude and straightness of cross-over lines.

FM RF ALIGNMENT — SELECTOR IN FM POSITION

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	CONNECT VTVM	ADJUST	REMARKS
8.	High side thru 270Ω to FM antenna terminal. Low side to chassis.	87MC (Unmod.)	(FM) Tuning gang fully closed.	DC probe to point Ⓐ. Common to chassis.	A14	Adjust by expanding or compressing coil turns for maximum deflection.
9.	"	109MC	Tuning gang fully open.	"	A15	Adjust for maximum deflection.
10.	"	87MC	Tuning gang fully closed.	"	A16, A17	Adjust by expanding or compressing coil turns for maximum deflection.
11.	"	109MC	Tuning gang fully open.	"	A18	Adjust for maximum deflection. Repeat Steps 8 thru 11.

FIG. 1

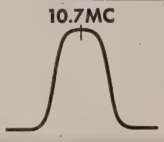


FIG. 2

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA76	FM RF Amplifier	2N1177		PNP
X2	2SA76	FM Converter	2N1178		PNP
X3	2SA93	1st FM IF Amp.	2N1180		PNP
X4	2SA52	AM Converter	2N412	2N486	PNP
X5	2SA93	2nd FM-1st AM IF Amp.	2N410		PNP
X6	2SA93	3rd FM-2nd AM IF Amp.	2N410		PNP
X7	2SB54	AF Amplifier	2N406	2N362	PNP
X8	2SB54	Driver	2N406	2N362	PNP
X9	2SB202	Output	2N408	2N633	PNP
X10	2SB202	Output	2N408	2N633	PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	TOSHIBA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	10	10		BCD10010	ECPB408	MT1-5	PET1340	MLV10-10	VL-1127
C2	5	10		BCD12005	ECPB405	MT1-3	PET1535	MLV5-12	VL-1124
C3	80	3		BCD10080	ECPB16	MT1-21	TT6X80	MLV100-3	VL-1048
C4	8	6		BCD6008	ECPB107	MT1-5	PET1340	MLV10-6	VL-1086
C5	80	3		BCD10080	ECPB16	MT1-21	TT6X80	MLV100-3	VL-1048
C6	8	6		BCD6008	ECPB107	MT1-5	PET1340	MLV10-6	VL-1086
C7	500	6	06T-500	PRSL120			TC605	TD-500-6	
C8	200	6	06T-200	PTT31	NLW200-12	MT1-23		MLV200-6	TE-1104

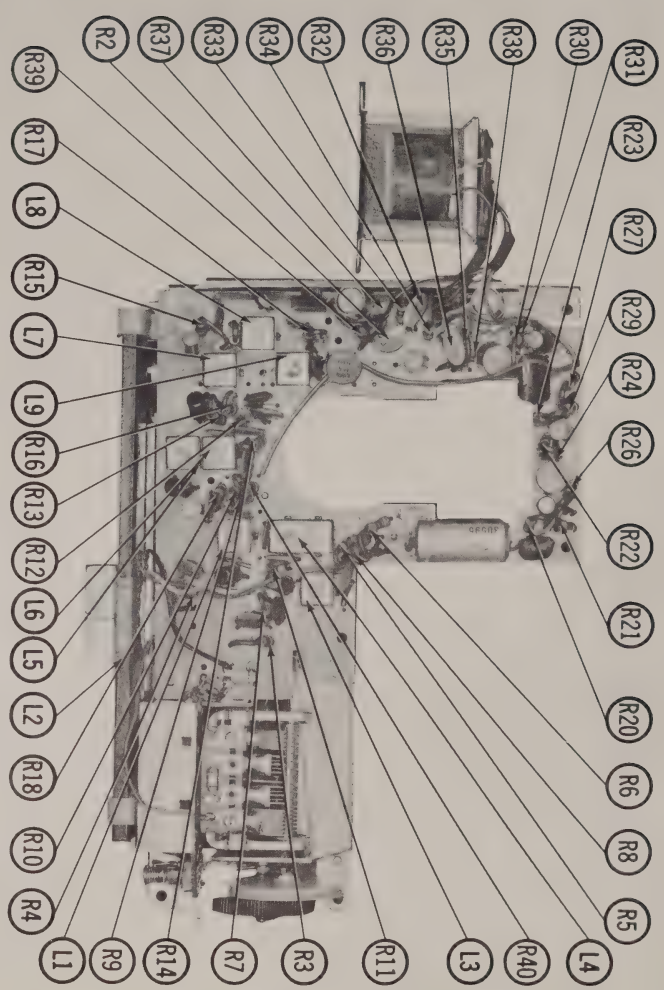
FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C9	4.7		NPO-DI 4.7	DTZ-4R7	C10V47C	CCTO-4R7	CNO-547	10TCC-V47
C10	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C11	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C12	6.8		NPO-DI 6.8	DTZ-6R8	C10V68C	CCTO-6R8	CNO-568	10TCC-V68
C13	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C14	5.6							10TCC-V56
C15	.01		C80V103AM	DM-103	H-05S1	CCD-103	TA-110	TG-S10
C16	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C17	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C18	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20
C19	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C20	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C21	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20
C22	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C23	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C24	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20
C25	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C26	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20
C27	.01		C80V103AM	DM-103	H-05S1	CCD-103	TA-110	TG-S10
C28	.001		C80V102AM	DM-102	H-05D1	CCD-102	B-210	TG-D10
C29	.01		C80V103AM	DM-103	H-05S1	CCD-103	TA-110	TG-S10
C30	.02		C80V203AM	DA-203	H-05S2	CCD-203	TA-120	TG-S20
C31	.1		C80V104AM	DA-104	H-05P1		TA-010	TG-P10
C32	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C33	.25							
C34	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C35	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	TOSHIBA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	50K	1/4	16T50KΩA					Volume & Switch
R2	1500Ω	1/4	11B1.5KΩ					Transistor Balance

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R3	820Ω			
R4	47Ω			
R5	27K			
R6	6800Ω			
R7	2200Ω			
R8	47Ω			
R9	45K			
R10	10K			
R11	680Ω			
R12	5600Ω			
R13	22K			
R14	680Ω			
R15	33K			
R16	1000Ω			
R17	470Ω			
R18	5600Ω			
R19	3900Ω			
R20	27K			
R21	47K			

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R22	22Ω			
R23	1000Ω			
R24	1500Ω			
R25	5100Ω			
R26	1000Ω			
R27	100Ω			
R28	3300Ω			
R29	18K			
R30	100Ω			
R31	1000Ω			
R32	Temp. Comp.			Pt. #M-8607
R33	56Ω			
R34	560Ω			
R35	56Ω			
R36	Temp. Comp.			Pt. #M-8607
R37	0.5Ω			
R38	0.5Ω			
R39	22Ω			
R40	22Ω			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		TOSHIBA PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	2nd FM IF	IT-1077					
L2	Loopstick	LH-242					
L3	AM Osc.	LH-179					
L4	1st AM IF	IT-1081					
L5	3rd FM IF	IT-1078					
L6	2nd AM IF	IT-1082					
L7	Ratio Det. Prim.	IT-1079					
L8	Ratio Det. Sec.	IT-1080					
L9	3rd AM IF	IT-1083					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TOSHIBA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	2.8	1 SEC. 2 1	DT-1245					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TOSHIBA PART No.	QUAM PART No.	
SP1	4"	PM	6-8Ω	SP-4005C	4A05Z8	

BATTERIES

ITEM No.	VOLTAGE	TOSHIBA PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1.5V	UM-1		230		A100		M-13R	4 Required

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		TOSHIBA PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M2	1N60			1N60	AVC (Pigtail)
M3	1N60			1N60	Limiter (Pigtail)
M4	1N60			1N60	FM Det. (Pigtail)
M5	1N60			1N60	
M6	1N60			1N60	AM Det. (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	TOSHIBA PART No.	NOTES
M7 M8 M9	FM Tuner Tuning Cap. Switch		Complete 4 Gang FM-AM (Pushbutton Type)

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

PHOTOFACT® Folder with CIRCUITRACE®

WEBCOR MODEL E306

TRADE NAME	Webcor, Model E306		
MANUFACTURER	Webcor, Inc., 912 W. North Ave., Chicago 22, Illinois		
TYPE SET	Battery Operated Transistorized Portable BC-SW Receiver		
POWER SUPPLY	9 Volts DC	RATING	7MA@ 9 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	540-1600KC		15MA@ 9 Volts DC (Signal, Normal Volume)
SHORT WAVE	4-11MC		

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1, A2, A3, A4, A6, A7, A9... GENERAL CEMENT #5004, 5008, 5009
WALSCO #2520
A5.... ... . GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
WALSCO #2515, 2531, 2532

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.	455KC (400~ Mod.)	(MW) Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
2.	"	1600KC	1600KC	"	A4	"
3.	"	600KC	600KC	"	A5	"
4.	"	1400KC	1400KC	"	A6	"
5.	"	11MC	(SW) 11MC	"	A7	"
6.	"	4MC	4MC	"	A8	"
7.	"	9MC	9MC	"	A9	Adjust for maximum output. Repeat Steps 2 thru 7.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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WEBCOR MODEL E306
WEBCOR MODEL E306
SET 554 FOLDER 15

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA80	Converter			PNP
X2	2SA12	1st IF Amplifier			PNP
X3	2SA12	2nd IF Amplifier			PNP
X4	2SB75	Driver	2N406		PNP
X5	2SB77	Output	2N408		PNP
X6	2SB77	Output	2N408		PNP
X7	HV-15	Bias Diode	1N2326		PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	WEBCOR PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	30	6		PTT27	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C2	3	6		PTT20	NLW4-15	MT1-3	TT6X3	MLV5-6	TE-1082
C3	30	6		PTT27	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C4	20	10		PTT41	NLW20-15	MT1-10	TT15X20	MLV20-10	TE-1130
C5	20	10		PTT41	NLW20-15	MT1-10	TT15X20	MLV20-10	TE-1130

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C6A								
B								
C								
D								
C7	5		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C8	300 5%							
C9	5		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C10	.005		C80V502AM	DM-502	H-05D5	CCD-502	TA-250	TG-D50
C11	.0022		1464-0022		1R5D22	CCD-222	GP222	5HK-D22
C12	10		NPO-SI 10	TCZ-10	C10Q1C	CCTO-100	CNO-410	10TCC-Q10
C13	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C14	.04							
C15	7 ±.5mmf		NPO-SI 6.8	TCZ-6R8	C10V7C	CCTO-6R8	CNO-568	10TCC-V68
C16	.04							
C17	.04							
C18	5		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50
C19	.04							
C20	.01		C80V103AM	DM-103	H-05S1		TA-110	TG-S10
C21	.0033		BPD-0033	DD-332		CCD-332	GP233	5HK-D33
C22	.02		C80V203AM	DA-203	H-05S2		TA-120	TG-S20
C23	.04							
C24	.0022		BPD-0022	DD-222	BYA10D22	CCD-222	GP222	5HK-D22

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	WEBCOR PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	5000Ω	1/10						Volume & Switch

(CONTINUED ON REAR PAGE)

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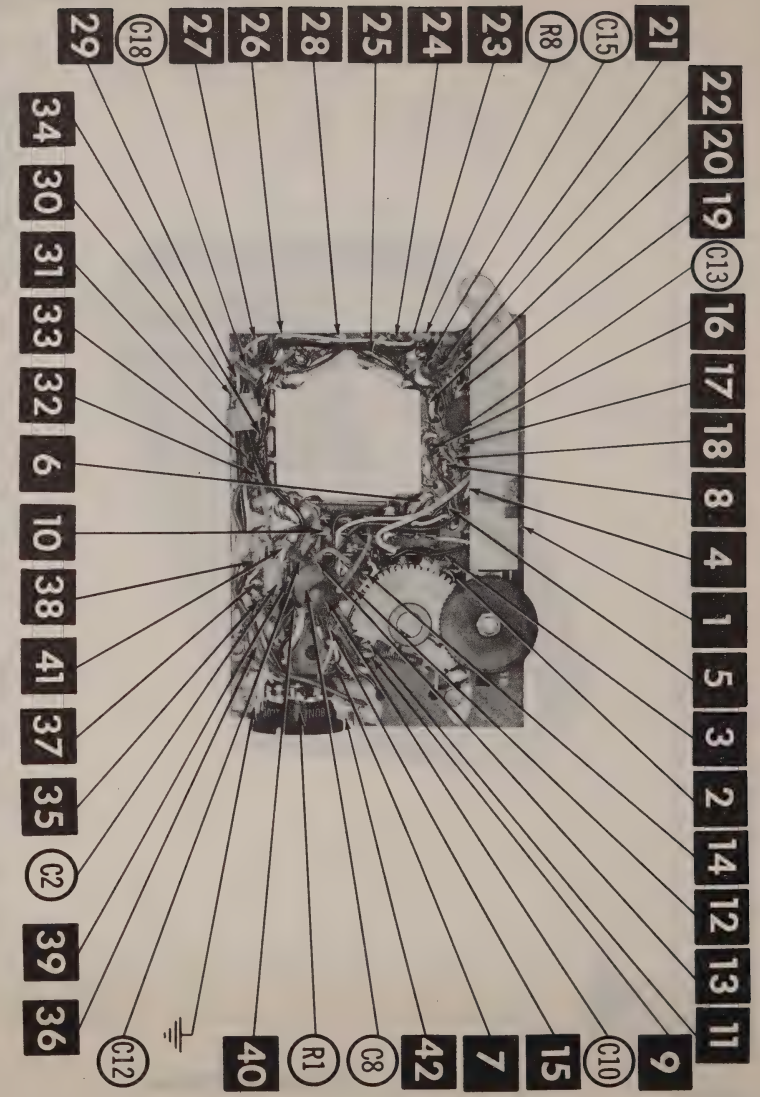
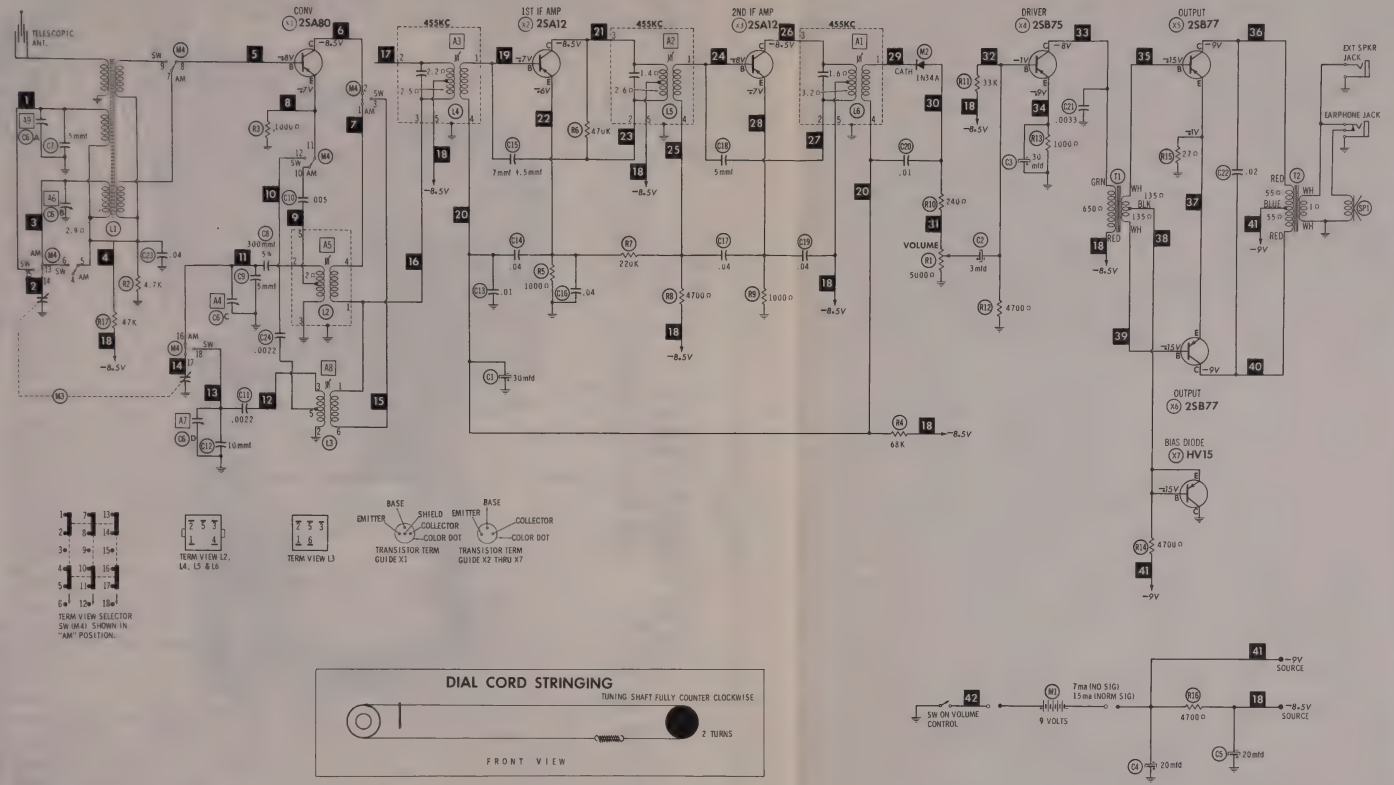
PRINTED BOARD





RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE™

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WEBCOR MODEL E306

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R2	4.7K			
R3	1000Ω			
R4	68K			
R5	1000Ω			
R6	470K			
R7	220K			
R8	4700Ω			
R9	1000Ω			

ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS
R10	240Ω			
R11	33K			
R12	4700Ω			
R13	1000Ω			
R14	4700Ω			
R15	27Ω			
R16	4700Ω			
R17	47K			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		WEBCOR PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1A	BC Loopstick						
B	SW Loopstick						
L2	BC Oscillator						
L3	SW Oscillator						
L4	1st IF						
L5	2nd IF						
L6	3rd IF						

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	WEBCOR PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	1.5	1	G-12302					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	WEBCOR PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	2500Ω CT	10-12Ω	G-12403					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	WEBCOR PART No.	QUAM PART No.	
SP1	2 1/4"	PM	10-12Ω	PD-2201	22A06Z8	

BATTERIES

ITEM No.	VOLTAGE	WEBCOR PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	9V	006P		2U6		216		M-1604	

SIGNAL DIODES

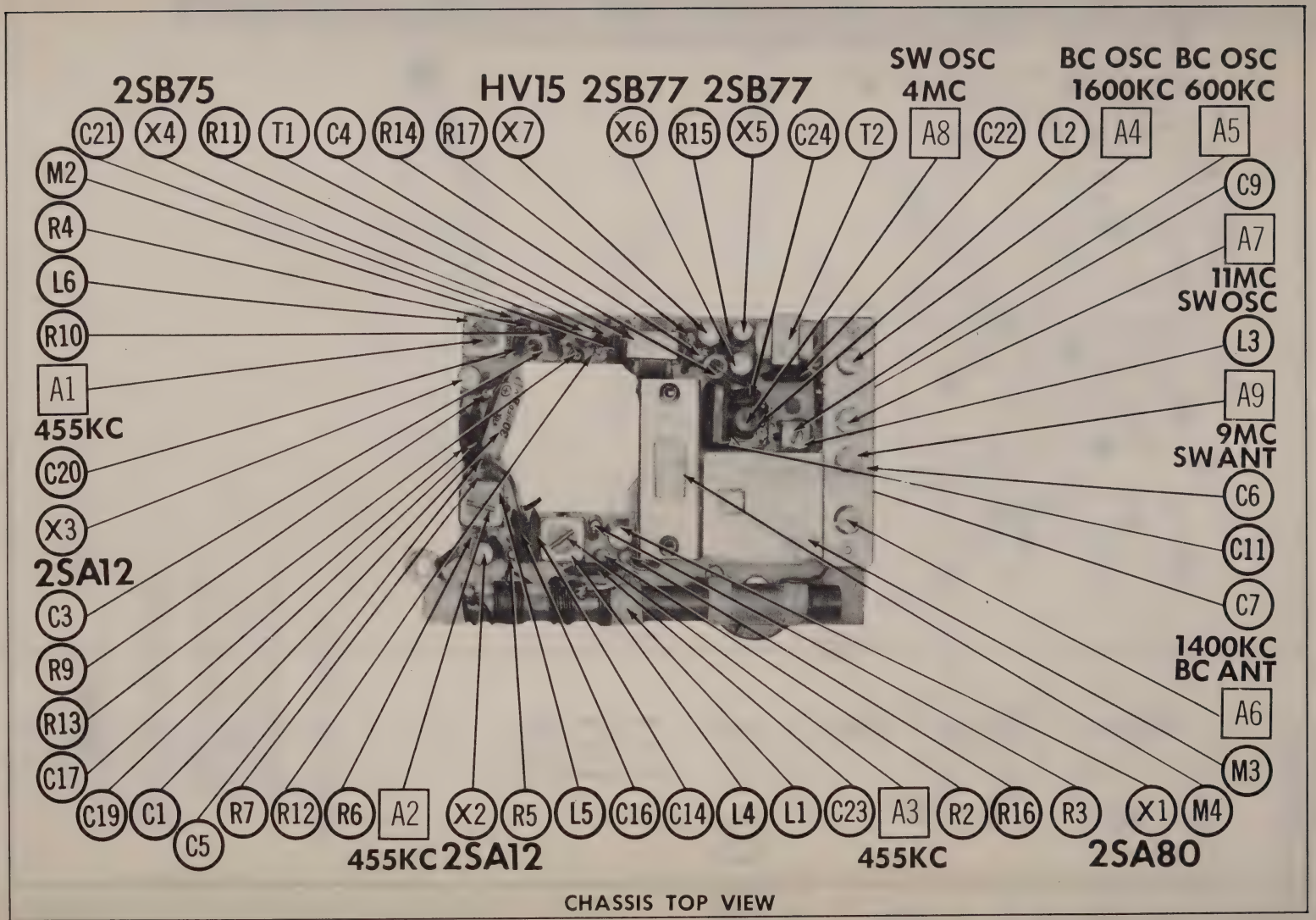
ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		WEBCOR PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M2	1N34A			1N34A	Detector (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	WEBCOR PART No.	NOTES
M3	Tuning Cap.		2 Gang
M4	Switch		Band Selector (Slide Type)

WIRING DATA

General-use Unshielded Hook-up Wire .....Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors



CHASSIS TOP VIEW

PHOTOFACT® Folder with CIRCUITRACE®

WEBCOR MODELS EP-1163-1, TP-1163-1 (Ch. 14X354-1)

WEBCOR MODELS EP-1163-1, TP-1163-1 (Ch. 14X354-1)

WEBCOR MODELS EP-1163-1, TP-1163-1 (Ch. 14X354-1)

TRADE NAME	Webcor Models EP-1163-1, TP-1163-1 (Ch. 14X354-1)
MANUFACTURER	Webcor, Inc., 912 W. North Ave., Chicago 22, Illinois
TYPE SET	AC Operated 4 Tube Stereo Phono Amplifier With 4 Speed Automatic Record Changer
POWER SUPPLY	105 — 120 Volts AC, 60 Cycles RATING 48 Watts, .5 Amp. @ 117 Volts AC (Less Motor)

FOR SERVICE INFORMATION ON RECORD CHANGER E184-49 USED IN MODEL EP-1163-1 OR T184-49 USED IN MODEL TP-1163-1 — SEE WEBCOR 172 — PHOTOFACT SET 447 FOLDER 13 OR RECORD CHANGER MANUAL RC-12

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KT758

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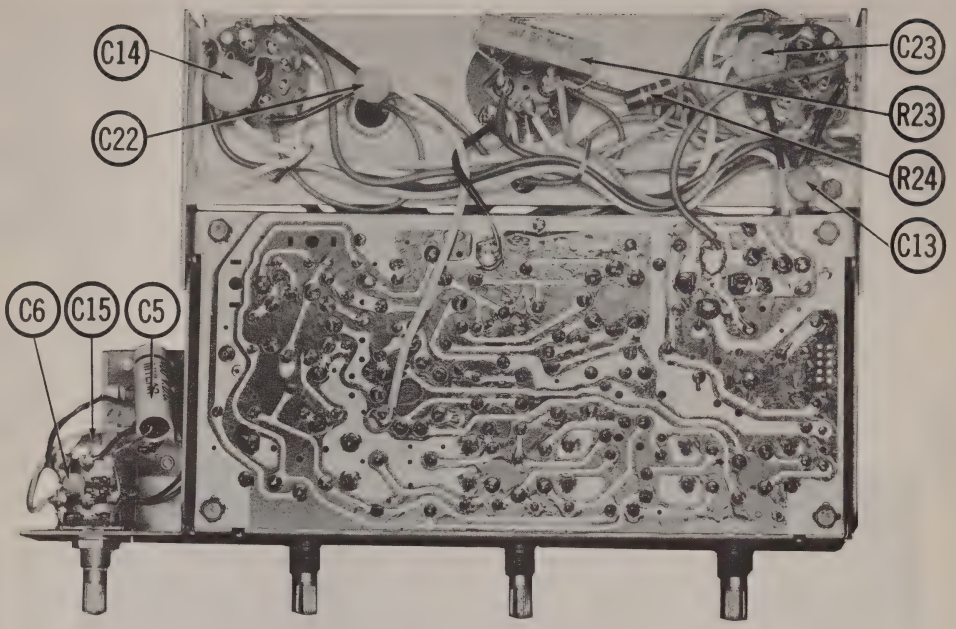
SET 554 FOLDER 16

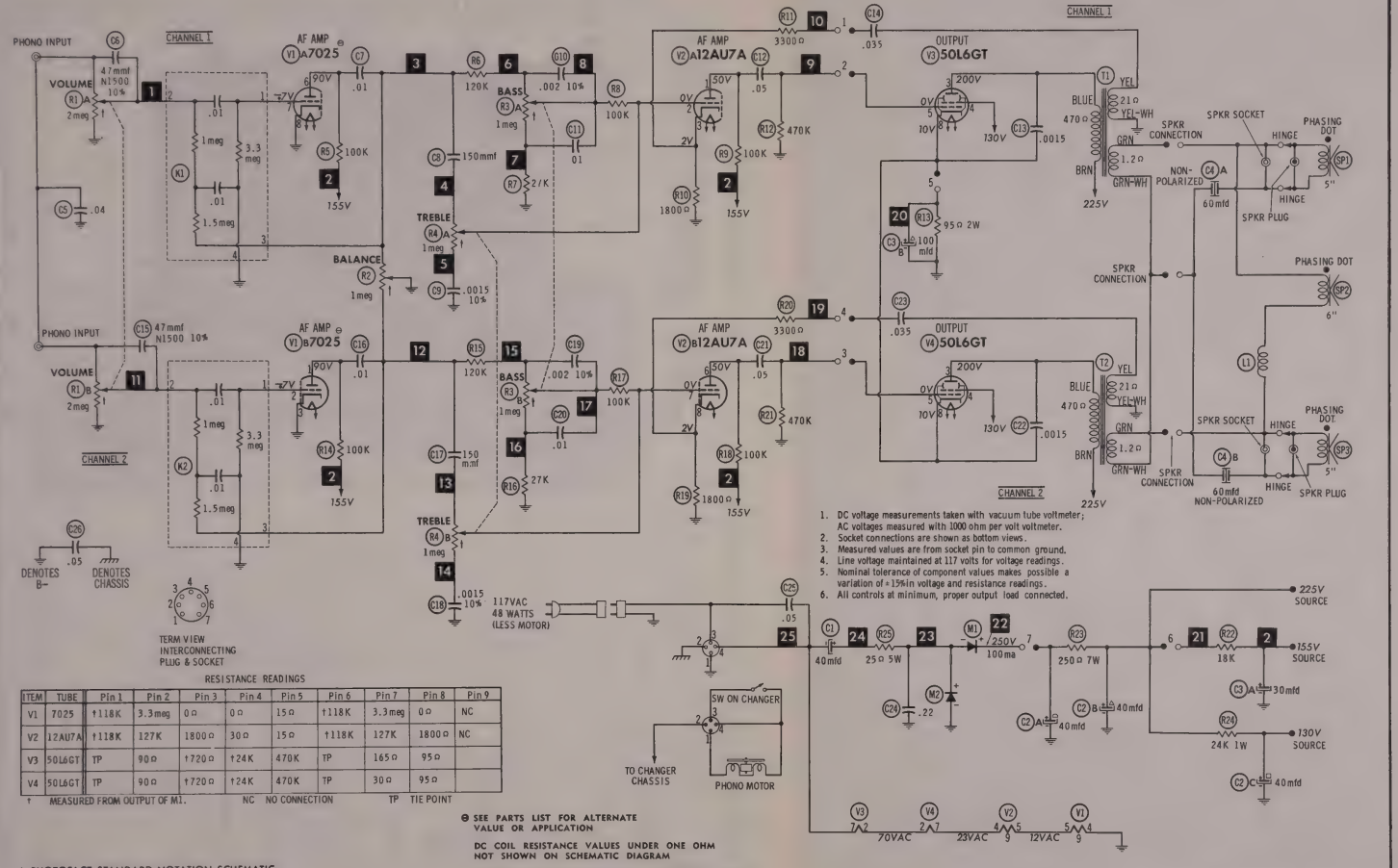


CHASSIS BOTTOM VIEW

A Howard W. Sams CIRCUITRACE Photo

CHASSIS BOTTOM VIEW

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9
V1	7025	†118K	3.3meg	0Ω	0Ω	15Ω	†118K	3.3meg	0Ω	NC
V2	12AU7A	†118K	127K	1800Ω	30Ω	15Ω	†118K	127K	1800Ω	NC
V3	50L6GT	TP	90Ω	†720Ω	†24K	470K	TP	165Ω	95Ω	
V4	50L6GT	TP	90Ω	†720Ω	†24K	470K	TP	30Ω	95Ω	

† MEASURED FROM OUTPUT OF M1. NC NO CONNECTION TP TIE POINT

1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance of component values makes possible a variation of ±15% in voltage and resistance readings.
6. All controls at minimum, proper output load connected.

Θ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE®

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WEBCOR MODELS EP-1163-1, TP-1163-1 (Ch. 14X354-1)

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE (• GENERAL ELECTRIC • RAYTHEON • SYLVANIA •)
V1	Channel 1 AF Amp. - Channel 2 AF Amp.	7025 (12AX7) *
V2	Channel 1 AF Amp. - Channel 2 AF Amp.	12AU7A
V3	Channel 1 Output	50L6GT
V4	Channel 2 Output	50L6GT

* Alternate

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	WEBCOR PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	40	250	30P428	PRS1580	BR4025	QT1-14	TC58	TD-40-250	TVA-1511
C2A	▲40	350	30P412	AFH2-40			FP420, 35	TMD-2390	TVL-1663
B	▲40	350		PRS1670			TC77	TD-40-350	TVA-2740
C	■40	350							
C3A	30	350	30P426	PRS1600					
B	▲100	15		PRS1200					
C4A	60	25NP	30P422	PRS7330	BR6015				TVANS-1206.1*
B	60	25NP		PRS7330	BR6015				TVANS-1206.1*

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C5	.04 400V		P488N-04	DD-403	CUB6S4	4DP-3-403	GEM-414	4TM-S40
C6	47 N1500 10%			TCL-47		*		
C7	.01		BPL-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C8	150		DI-150	DD-151	L10T15	CCD-151	B-315	10TS-T15
C9	.0015 10%		DI-1500	DD-152	5R5D15	CCD-152	GP215	10TS-D15
C10	.002 10%		DI-2000		5R5D2	CCD-202	GP220	10TS-D20
C11	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C12	.05		BPD-05	DD-503	CUB4S5	4DP-3-503	GP150	5HK-S50
C13	.0015		BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C14	.035				CUB6S33	1DP-1-333	GEM-4133	4TM-S33
C15	47 N1500 10%			TCL-47		*		
C16	.01		BPL-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C17	150		DI-150	DD-151	L10T15	CCD-151	B-315	10TS-T15
C18	.0015 10%		DI-1500	DD-152	5R5D15	CCD-152	GP215	10TS-D15
C19	.002 10%		DI-2000		5R5D2	CCD-202	GP220	10TS-D20
C20	.01		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C21	.05		BPL-05	DD-503	CUB4S5	4DP-3-503	GP150	5HK-S50
C22	.0015		BPD-0015	DD-152	BYA10D15	CCD-152	B-215	5HK-D15
C23	.035				CUB6S33	1DP-1-333	GEM-4133	4TM-S33
C24	.22 400V		P415IN-22		BC6P22J	4DP-5-224	ACE-6022	4SE-P22

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C25	.05 400V		P415IN-05	DD-503	BC6S47J	4DP-3-503	ACE-415	4SE-S47
C26	.05 400V		P415IN-05	DD-503	BC6S47J	4DP-3-503	ACE-415	4SE-S47

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	WEBCOR PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1A	2meg		31P194	B-76	AD47-2meg-2		FA26A	Volume, Channel 2
B	2meg			SR-76	Not Req.		RU26A	Volume, Channel 1
C	Shaft			Not Req.	KSS-3		CS3500	
R2	1meg		31P192				P2-16L-D *	Balance
R3A	1meg		31P193					Bass, Channel 1
B	1meg							Bass, Channel 2
R4A	1meg		31P193					Treble, Channel 1
B	1meg							Treble, Channel 2

* Do not use switch.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	IRC PART No.	WORKMAN TV PART No.	REMARKS
R5	100K			
R6	120K			
R7	27K			
R8	100K			
R9	100K			
R10	1800Ω			
R11	3300Ω			
R12	470K			
R13	95Ω 2W			
R14	100K			
R15	120K			
R16	27K			
R17	100K			
R18	100K			
R19	1800Ω			
R20	3300Ω			
R21	470K			
R22	18K			
R23	250Ω 7W	PW7-250	7W-SQ-250	
R24	24K 1W			
R25	25Ω 5W	PW5-25Ω	5W-SQ-25	

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	WEBCOR PART No.	REPLACEMENT DATA
K1	AF Amp. Grid	.01mfd, .01mfd, 1meg, 1.5meg, 3.3meg	62P045-1	
K2	AF Amp. Grid	.01mfd, .01mfd, 1meg, 1.5meg, 3.3meg	62P045-1	

PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		WEBCOR PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	Crossover (5MH)	63X016					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	WEBCOR PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	4200Ω	6-8Ω	67P094C					
		SEC. 2						
		30Ω						
		SEC. 1						
T2	4200Ω	6-8Ω	67P094C					
		SEC. 2						
		30Ω						

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	WEBCOR PART No.	QUAM PART No.	
SP1	5"	PM	6-8Ω	76P097	5A1Z8	
SP2	6"	PM	14-16Ω	76P110	6A15Z16	
SP3	5"	PM	6-8Ω	76P097	5A1Z8	

POWER RECTIFIERS

ITEM No.	RATING	REPLACEMENT DATA			NOTES
	CURRENT (Measured)	WEBCOR PART No.	RCA PART No.	SARKES TARZIAN PART No.	
M1	.100A	65P155	1N1763	40H	
M2	.100A	65P155	1N1763	40H	

PHONO CARTRIDGE & NEEDLES

*NEEDLE LISTINGS SHOWN ARE FOR RESPECTIVE REPLACEMENT CARTRIDGES ONLY.

ITEM No.	REPLACEMENT DATA								NOTES
	WEBCOR PART No.		ASTATIC PART No.		ELECTRO-VOICE PART No.		SONOTONE PART No.		
	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	CARTRIDGE	NEEDLE*	
M3	21P710	Not Req.	17	Not Req.	26S	2604* & 2605*	10T2-S	Not Req.	

CABINETS & CABINET PARTS

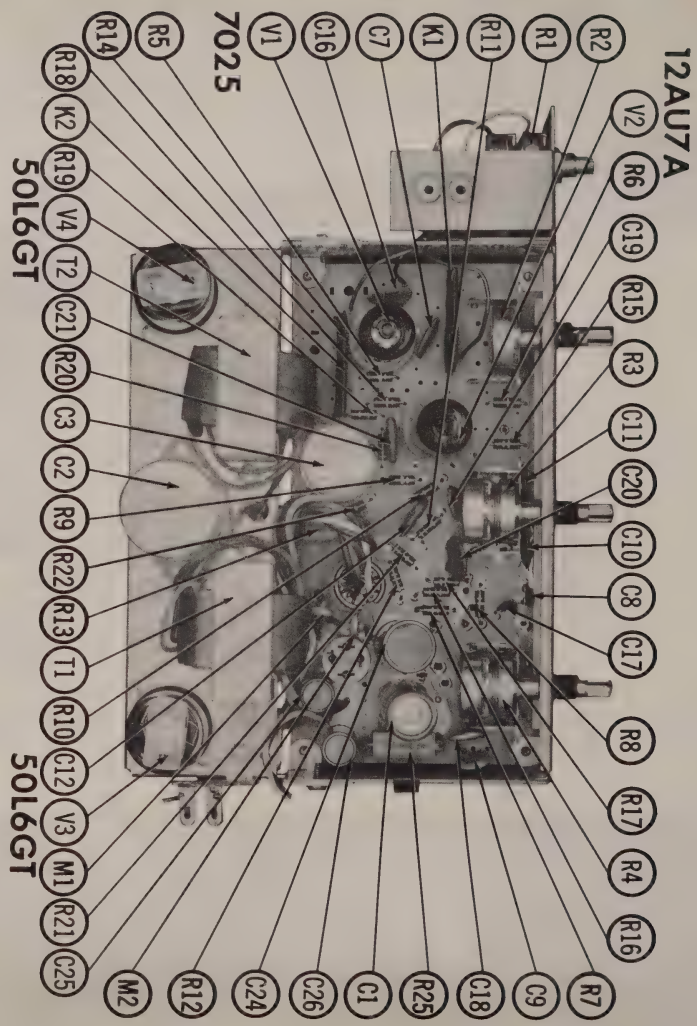
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	39P271-2	Volume, Tone, Model TP-1163-1
Knob	39P271-1	Volume, Tone, Model EP-1163-1
Speaker Cabinet	11X2503-1	Left, Ebony, Model EP-1163-1
Speaker Cabinet	11X2504-1	Right, Ebony, Model EP-1163-1
Speaker Cabinet	11X2503-2	Left, Tan, Model TP-1163-1
Speaker Cabinet	11X2504-2	Right, Tan, Model TP-1163-1
Cabinet	92X138-1	Ebony, Model EP-1163-1
Cabinet	92X138-2	Tan, Model TP-1163-1
Handle	39P238-2	Brown, Model TP-1163-1
Handle	39P238-3	Ebony, Model EP-1163-1

WIRING DATA

General-use Unshielded Hook-up Wire	Use BELDEN No.	8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors
Power Cord	Use BELDEN No.	1765-B (6 Ft. Length) 1725-K (7½ Ft. Length)
Low-Loss Shielded Lead (Interconnecting)	Use BELDEN No.	8401
Phono Pick-up Arm Cable	Use BELDEN No.	8430 (Two Conductor - Twisted)

CHASSIS—TOP VIEW



PHOTOFACT® Folder with CIRCUITRACE®

WESTINGHOUSE MODELS
H-759T6, H-760T6 (Ch. V-2410-2)

WESTINGHOUSE MODELS
H-759T6, H-760T6 (Ch. V-2410-2)

MODEL H-759T6

TRADE NAME	Westinghouse Models H-759T6, H-760T6 (Ch. V-2410-2)
MANUFACTURER	Westinghouse Electric Corp., Radio - TV Division, Metuchen, N. J.
TYPE SET	AC-DC Operated 6 Tube AM Receiver
POWER SUPPLY	105 - 120 Volts AC-DC RATING 23 Watts, .25 Amp. @117 Volts AC
TUNING RANGE—BROADCAST	540 - 1600KC

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

Suggested Alignment Tools: A1 thru A4, A8... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545
A5, A6, A7..... GENERAL CEMENT #5004, 5008, 5009
WALSCO #2520

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .02mfd to RF stator lug of tuning gang. Low side to chassis.	455KC (400% Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
2.	High side thru .02mfd to Antenna stator lug of tuning gang. Low side to chassis.	1625KC	"	"	A5	"
3.	"	1400KC	1400KC	"	A6	"
4.	Loop	"	"	"	A7	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
5.	High side thru .02mfd to Antenna stator lug of tuning gang. Low side to chassis.	600KC	600KC	"	A8	Adjust A8 (bottom slug only) for maximum output. If top slug is moved, reset to 1/8" from top.

WESTINGHOUSE MODELS
H-759T6, H-760T6 (Ch. V-2410-2)

SET 554 FOLDER 17

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

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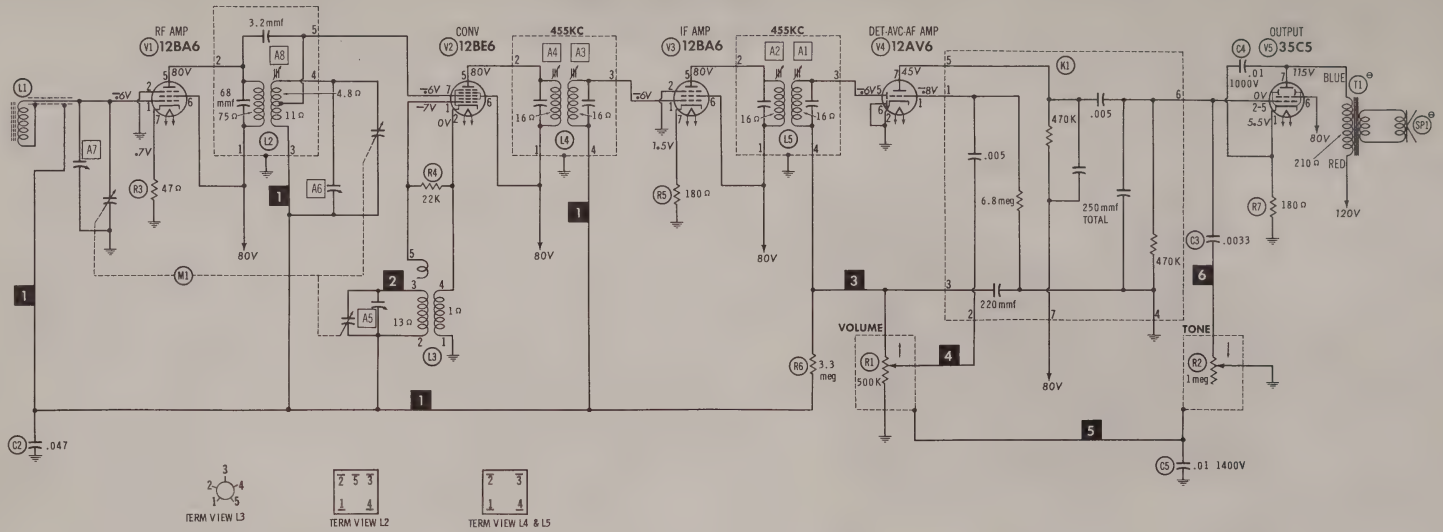


TERM VIEW L3

TERM VIEW L2

TERM VIEW L4 & L5

NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

⊖ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

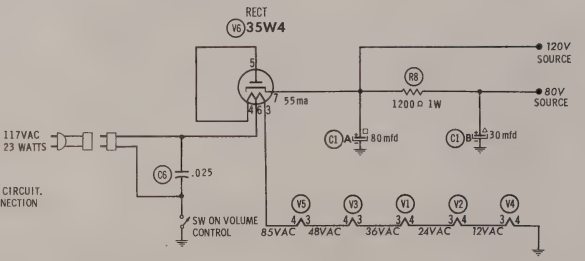
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

RESISTANCE READINGS

ITEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7
V1	12BA6	3.8meg	0Ω	45Ω	30Ω	†1200Ω	†1200Ω	47Ω
V2	12BE6	22K	1Ω	30Ω	15Ω	†1200Ω	†1200Ω	3.8meg
V3	12BA6	3.8meg	0Ω	45Ω	60Ω	†1200Ω	†1200Ω	180Ω
V4	12AV6	6.8meg	0Ω	15Ω	0Ω	500K	0Ω	†470K
V5	35C5	180Ω	470K	60Ω	100Ω	470K	†1200Ω	†210Ω
V6	35W4	NC	NC	100Ω	140Ω	140Ω	135Ω	¶

¶ THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT.
† MEASURED FROM PIN 7 OF V6. NC NO CONNECTION



1. DC voltage measurements taken with vacuum tube voltmeter; AC voltages measured with 1000 ohm per volt voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common ground.
4. Line voltage maintained at 117 volts for voltage readings.
5. Nominal tolerance on component values makes possible a variation of ±15% in voltage and resistance readings.
6. Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC with CIRCUITRACE®

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WESTINGHOUSE MODELS H-759T6, H-760T6 (Ch. V-2410-2)

PARTS LIST AND DESCRIPTIONS

TUBES

ITEM No.	USE	TYPE (◆ GENERAL ELECTRIC ◆ RAYTHEON ◆ SYLVANIA ◆)
V1	RF Amplifier	12BA6
V2	Converter	12BE6
V3	IF Amplifier	12BA6
V4	Det.-AVC-AF Amp.	12AV6
V5	Output	35C5
V6	Rectifier	35W4

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	RATING VOLT.	REPLACEMENT DATA Westinghouse PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	NOTES
C1A	■80	150	218V025H52	PWH2-17-50	B0180 †	PWP214.4	TMD-2135♦	PCL-2441	
B	▲30	150							

† Use Printed Circuit Adapters #55277 & 55278.
♦ Use Printed Circuit Adapter Kit TMA.

FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C2	.047 200V		P288N-047	DD-503	CUB2S47	4DP-3-503	GEM-4147	2TM-S47
C3	.0033		BPD-0033	DD-332	BYA10D33	CCD-332	B-233	5HK-D33
C4	.01 1000V		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C5	.01 1400V		DAC-27	DDI6-103	HVE16S1	16DP-3-103	UAC-110	BL-S10
C6	.025				DPMS6S25	4DP-2-253	GEM-4125	5HK-S25

CONTROLS

ITEM No.	RATING RESISTANCE	RATING WATTS	REPLACEMENT DATA Westinghouse PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	INSTALLATION NOTES
R1	500K		270V027H18					Volume
R2A	1meg		270V027H19					Tone
B	Switch							Power Off-On

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REPLACEMENT DATA IRC PART No.	WORKMAN TV PART No.	REMARKS
R3	47Ω			
R4	22K			
R5	180Ω			
R6	3.3meg			
R7	180Ω			
R8	1200Ω 1W			

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA Westinghouse PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	NOTES
L1	Loopstick	310V063H02	BC-419	705-A		T532	
L2	RF	235V072H01					
L3	Osc.	230V004H04					
L4	Input IF	235V025H11	BC-356	13-PC1	RTC-8641	T614	
L5	Output IF	235V025H11	BC-357	13-PC2	RTC-8642	T615	

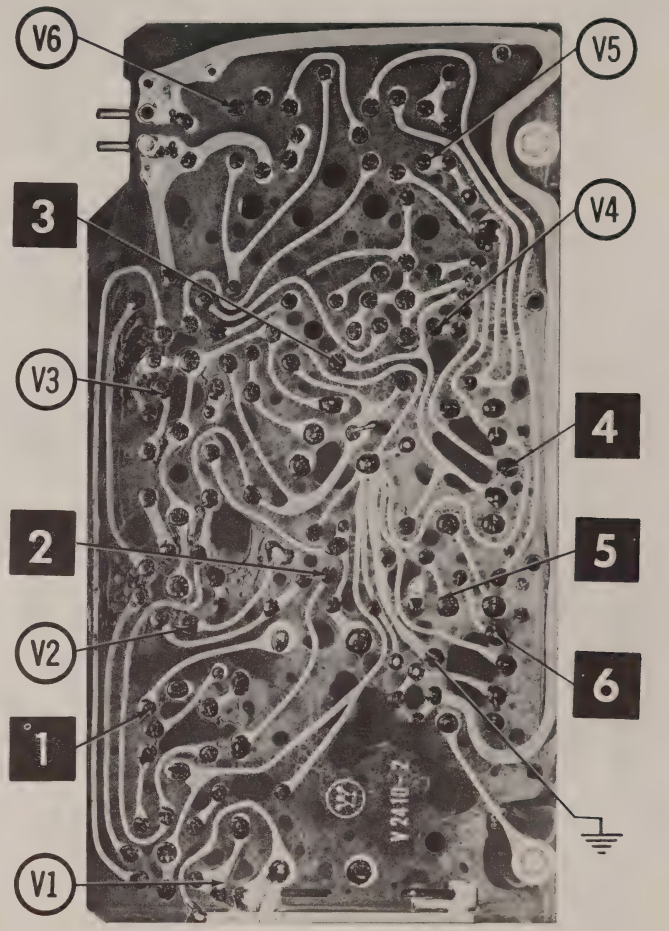
TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE PRI.	IMPEDANCE SEC.	REPLACEMENT DATA Westinghouse PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	NOTES
T1	2100Ω	3-4Ω	787V245H01①	A-3025	A-3332	24S53	S-20X	① Includes Speaker

PRINTED BOARD

A Howard W. Sams CIRCUITRACE® Photo

ARROWS INDICATING TUBE LOCATIONS ARE POINTING TO PIN 1 UNLESS OTHERWISE INDICATED



PARTS LIST AND DESCRIPTIONS (Continued)

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	Westinghouse PART No.	QUAM PART No.	
SP1	6"	PM	3-4Ω	570V089H01 787V245H01 *	6A1	*. Includes Output Transformer

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	Westinghouse PART No.	REPLACEMENT DATA
K1	Audio Coupling	220mmf, 250mmf, .005mfd, .005mfd, 470K, 470K, 6.8meg	219V001H01	Aerovox PA-512-3 Centralab PC-158 Mallory MS-107 Sprague DT-5

MISCELLANEOUS

ITEM No.	PART NAME	Westinghouse PART No.	NOTES
M1	Tuning Cap.	330V038H01	3 Gang

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

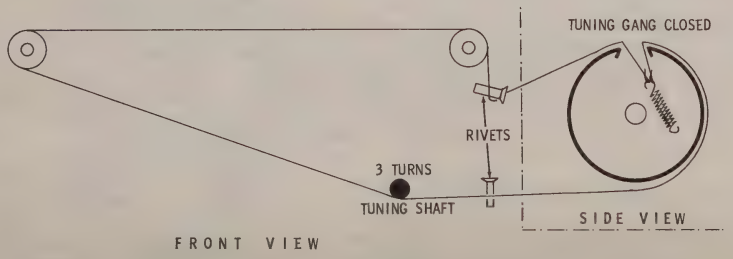
NAME	PART NO.	DESCRIPTION
Dial Crystal	558V340H02	
Dial Pointer	558V357H02	
Knob	550V160H01	Tuning, Volume
Knob	550V160H03	Tone
Cabinet Back	513V081H07	Model H-759T6
Cabinet Back	513V081H08	Model H-760T6
Cabinet Front	513V082H02	

WIRING DATA

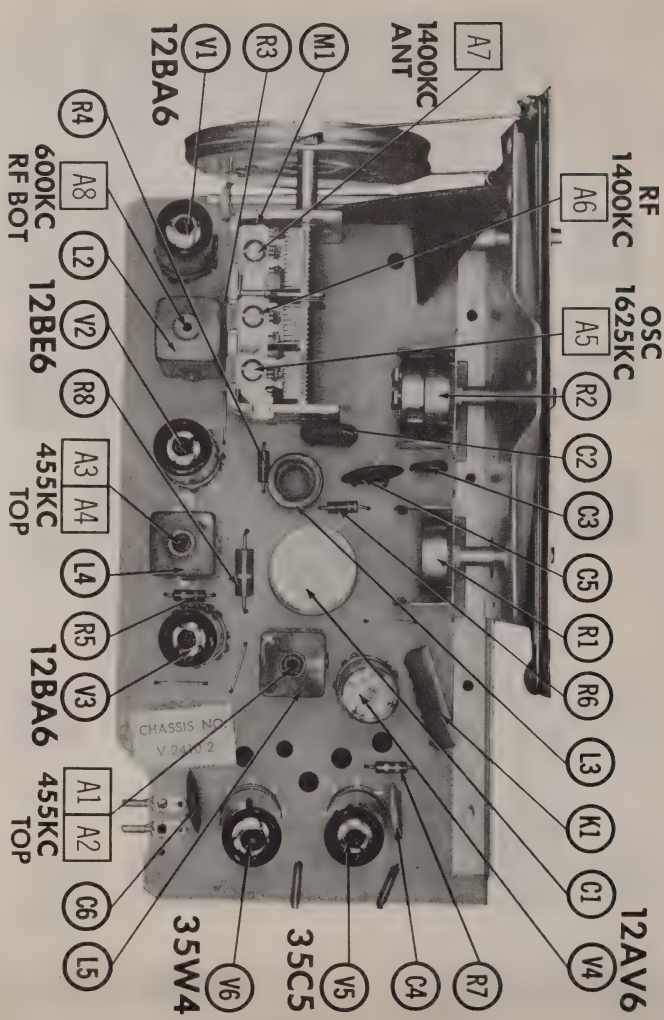
General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

Power Cord (Interlock Type) ..... Use BELDEN No. 8874

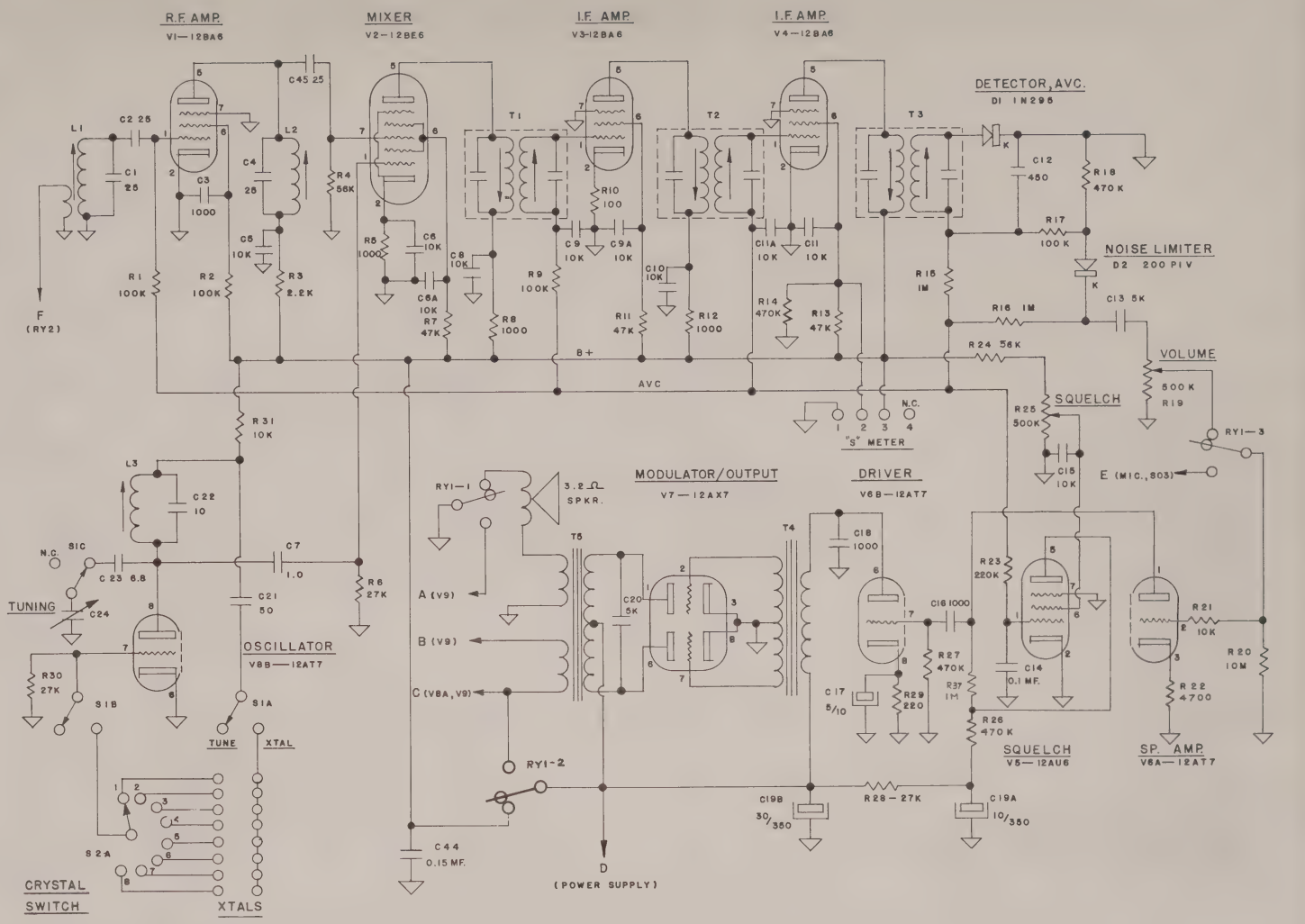
DIAL CORD STRINGING

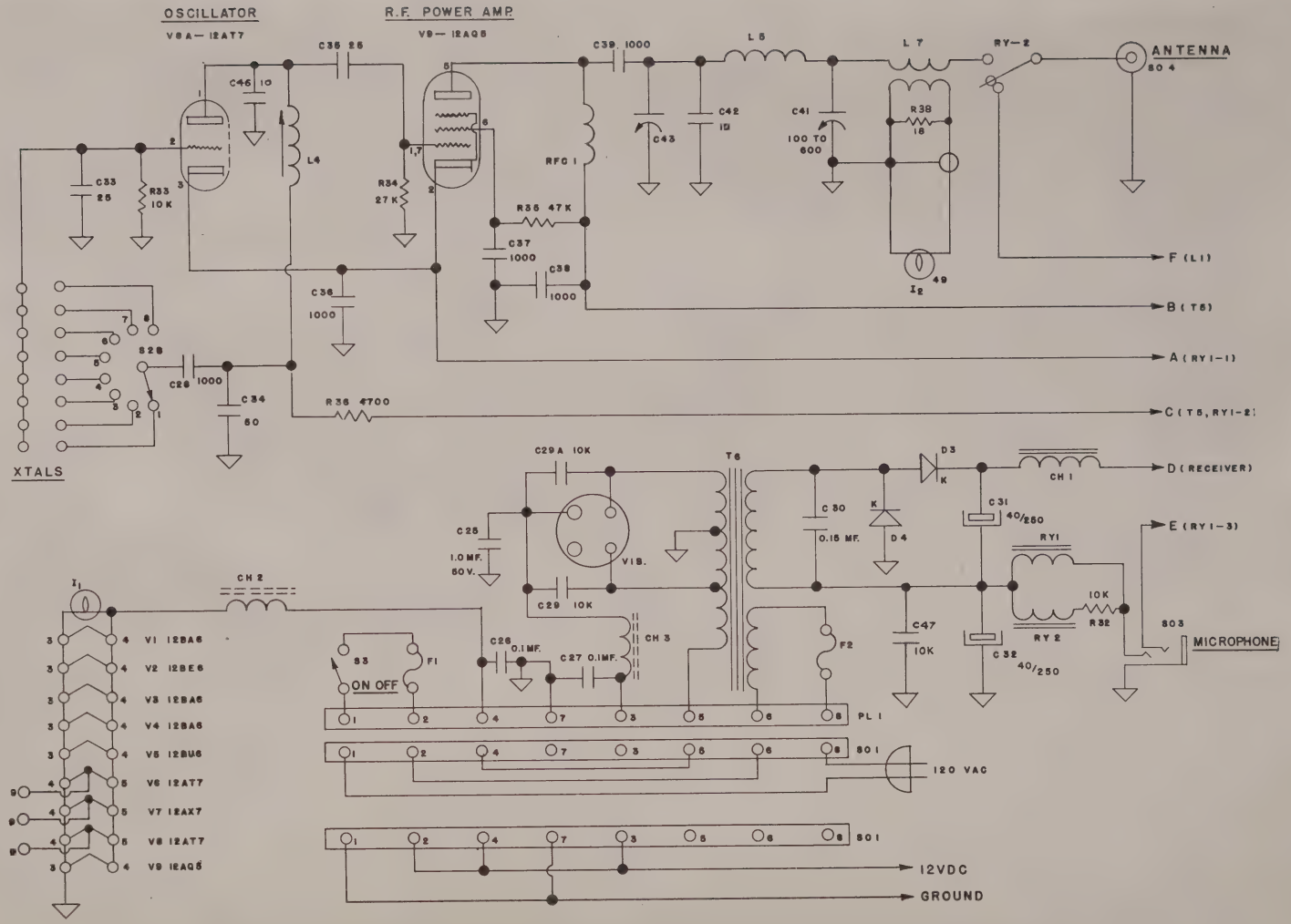


CHASSIS—TOP VIEW



SONAR MODEL E





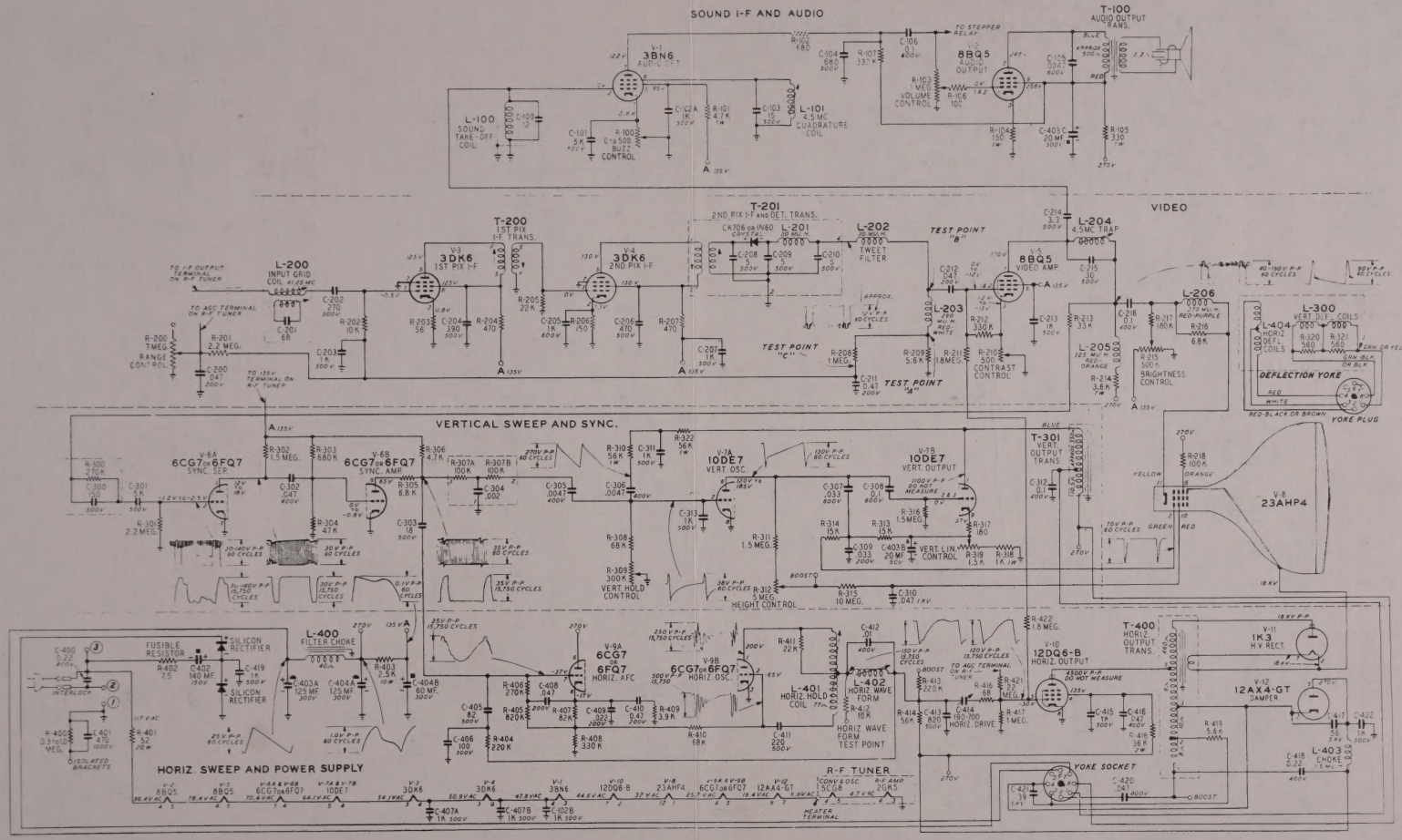
Schematic Diagram Courtesy of Sonar Radio Corporation

OSCILLOSCOPE WAVEFORM PATTERNS

The waveforms shown on the schematic diagram are as observed on a Tektronix type 524D wide band television oscilloscope with the receiver tuned to a reasonably strong signal and a normal picture. The voltages shown on each waveform are the approximate peak to peak amplitudes. The frequency accompanying each waveform indicates the repetition rate of the waveform not the sweep rate of the oscilloscope. If the waveforms are observed on the oscilloscope with a poor high frequency response, the corners of the pulses will tend to be more rounded than those shown on the schematic diagram and the amplitude of any high frequency pulse will tend to be less.

DC SOCKET VOLTAGES

All DC socket voltages shown on the schematic are measured with a high impedance VTVM and under zero signal conditions.



TRUETONE MODEL 2DC1278A

Schematic Diagram Courtesy of Western Auto Supply

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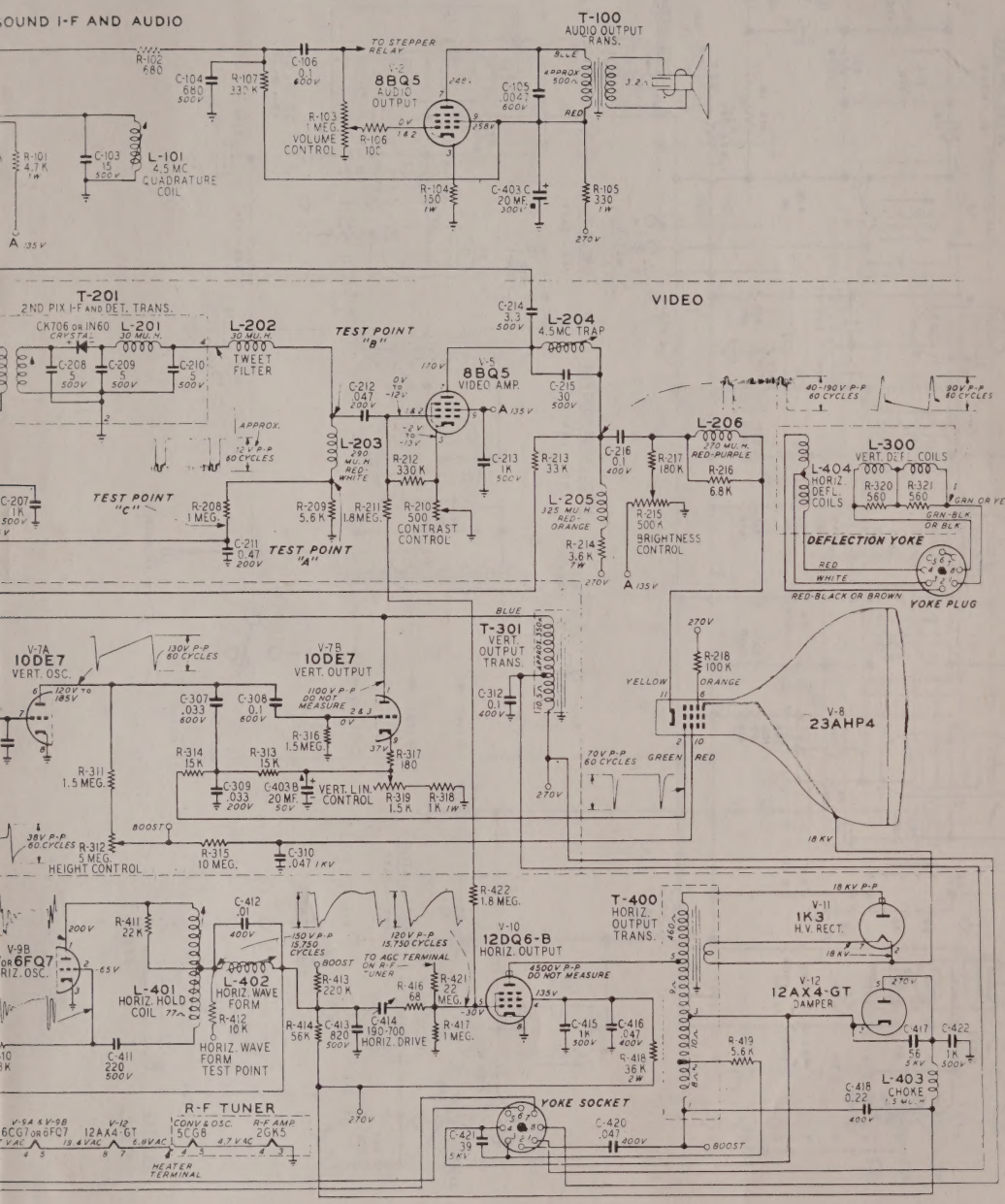
forms are observed on the oscilloscope with a poor high frequency response, the corners of the pulses will tend to be more rounded than those shown on the schematic diagram and the amplitude of any high frequency pulse will tend to be less.

DC SOCKET VOLTAGES

All DC socket voltages shown on the schematic are measured with a high impedance VTVM and under zero signal conditions.



Schematic Diagram Courtesy of Western Auto Supply